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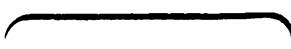
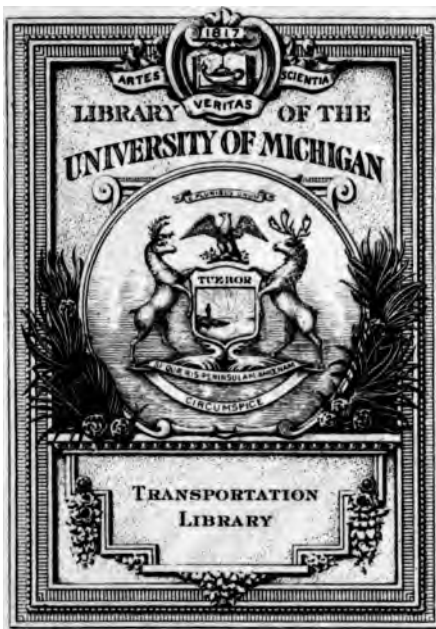
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An American Transportation System

*A Criticism of the
Past and the Present and
A Plan for the Future*

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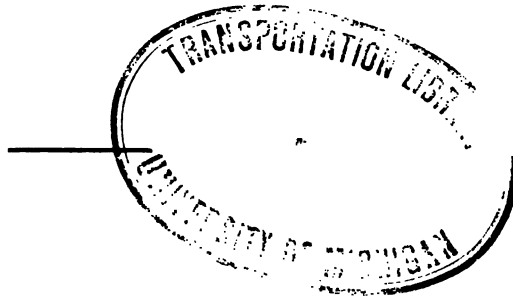
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An American Transportation System

**A Criticism of the Past and the Present
and a Plan for the Future**

By
George A. Rankin



G. P. Putnam's Sons
New York and London
The Knickerbocker Press
1909

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owners and the public, will be incapable of manipulating it, or its capital, for their unlawful individual enrichment.

4. The system should not itself be engaged in politics, nor should it be usable for political purposes, and, therefore, any scheme which has for its purpose the adjustment of the antagonism between the people and the transportation corporations should be one which eliminates them from American politics, state and national, as present or potential factors.

Such being the requirements, the problem dealt with is, how may they be realized. As to this, it is argued, that the facilities of transportation cannot operate with the highest degree of safety, efficiency, economy and fairness as disjointed, competitive and non-coöperating parts, but that the desired ends can be attained only by a transportation system, the members whereof operate as an harmoniously working whole. And, it is contended, such a system is impossible of realization so long as our railways are subject to the conflicting regulations of one congress and forty-five state legislatures. This condition, it is contended, is at once a governmental and a transportation absurdity.

How to be rid of this absurd situation, is the question. It is not obvious how it may be accomplished except by an amendment to the federal constitution whereby the states surrender their

semblance of jurisdiction over intrastate transportation.

To suggest this is to confront us with two great fears—railway monopoly and the centralization of power in the general government. Here the attempt has been made to show that we have now all the ills of federal control with none of the advantages which might be expected from it. The states have lost their authority, but the federal government has not acquired it. Authority everywhere is suspended by the veto power of the federal courts. The plan proposed in this book is to make the federal government responsible affirmatively in place of the mere power to negative state action, which it now possesses.

As to the fear of monopoly, it is candidly admitted that transportation is, and must be, a monopoly; but the proposal is to make it a legal monopoly, not an outlaw. It is, indeed, proposed to consolidate all our important transportation facilities in one corporation, but to exactly define the powers, duties and obligations of such corporation in the organic act creating it, limiting its capitalization to the actual cost of facilities produced, and making certain its compensation for services required, thus, to the greatest degree possible, rendering its securities stable, which it is hoped would obviate many of the evils now attendant upon stock exchange operations.

Finally, it is proposed to replace our present

multitudinous railway commissions by a court, possessed of judicial authority to inquire whether our transportation corporation is conducting itself in accordance with the law of its creation, to which court the trustee-managers shall make reports concerning the execution of their trust, as other trustees do to courts of equity.

G. A. R.

NEW YORK, February 15th, 1909.

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An American Transportation System

INTRODUCTION

Summary of the drift of thought concerning transportation

THERE are certain conclusions concerning transportation which will probably be disputed by no one. Thus it is often said a nation is an organism, not unlike a living individual, wherein the channels of transportation are arteries and veins; if the flow in these be sluggish, industrial disorders are indicated, if it be clogged, industrial diseases follow, if it be stopped, national disaster results.

To no country is the highest order of transportation more vital than to the United States. From a political standpoint this is so because of the huge distances which separate the political units which compose the nation, and because of the long frontiers and coast lines which must be defended. What matters it that we can raise

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great armies, if we cannot get them quickly where they are needed? From an industrial standpoint the necessity for excellent transportation is great in this country, because the United States affords the widest domain on this earth wherein there exists absolutely free and unrestricted trade. Of what use is this precious privilege, unless we have the means whereby it may be exercised? The United States is self-supporting as no other country is, yet its very vastness of territory, its consequent industrial heterogeneity and the interdependence of its industries but serve to exaggerate the demand for the most superior transportation facilities. In the absence of transportation as we have it to-day, but little heavy freight could be carried on land more than twenty miles without eating its value up in carriage charges. If our railway system were blotted out, our cities would become depopulated, our surplus crops rot in their fields, our mineral wealth lie unexplored and our factories idle. Therefore it is that the material well-being of this country depends so largely upon its system for the transportation of its people and the products of their labor and intelligence. Therefore it is that to keep the channels of transportation unclogged and unstopped is a charge upon the nation. And therefore, also, it is that the system of transportation must be sustained. He who cannot perceive these necessities is blind to facts and devoid of imagination.

Certain facts are obvious. Something long has been, is, and apparently will continue to be wrong, in the relations between the people and those who are engaged in the transportation business—something so wrong as at times to border on open hostilities. Drastic remedies spasmodically applied—boomerang laws to force competition and prevent combination, commissions overloaded with inefficiency, ill-considered and misapplied rate laws—have not reached, but have rather more deeply rooted the essential wrong.

From the records we may learn that the capital invested in transportation is about one-sixth of all the wealth of this country and that about one-twelfth of all our people depend for their livelihood on the wages paid by transportation corporations. It also appears that practically all the railways in the United States have consolidated into a few systems, which systems are themselves united by community of interest, and that the human heads of these systems hold at their mercy and control some seventeen thousand million dollars of the people's savings.

It is alleged that our transportation system, as a whole, is grossly over-capitalized; that for many of the securities, which represent the value of the system, no money was ever paid into its treasury and that over-capitalization serves as the excuse for exorbitant rates. Fictitious

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securities, it is said, are still being issued and will continue to be.

These fictitious securities, once issued, pass into the hands of innocent holders and thus become a charge upon the country, the repudiation of which becomes a national dishonor, and, therefore, the country must labor to make these fictions realities. Furthermore it is claimed that spurious securities are the main instrumentalities of the stock manipulator, and that thus the stock exchange becomes the slaughter-house of the people's savings. I but record these allegations not asserting their truth.

Some facts are but slightly appreciated; among these, how great has been the people's contribution to the building of our railway system. Ultimately they have always provided the money that bought the bonds which built the roads. Nor is it realized how extensive their present investment in railway securities is; how little part they have in the management of the property in which their savings are invested; how tremendous have been their losses from its mismanagement; how disgracefully wasteful to the country the financing of our railway system has been, is, and will continue to be, while present methods remain the custom.

Long ago the conclusions were reached that transportation corporations are not merely private affairs; that they exist for and owe their

first duty to the public; that they owe an equal duty to all the public; that the state has the right to compel them to serve the public justly; that directors and executives of corporations are, in the highest degree, trustees for stockholders; that it is unlawful for them to use their positions of trust for their own profit, and that the stock of a corporation can only be lawfully issued for value received by the corporation. These are old and full grown ideas, yet they have not borne much fruit.

Some ideas have been born and are apt to grow. Many people now believe that traffic preferences shown to certain places, or localities, are as abhorrent to our system of government, and as iniquitous in their results, as traffic privileges shown to individuals in the various forms of rebates. It has been stated by respectable authority that the profit-making burden of the entire transportation system is thrown upon the parts of the country least able to bear it, that is, non-competitive and non-junction points. Some may be found who claim that all forms of special preferences to persons and places, owe their origin to destructive competition between railways, or between railway and water transportation, that inland water transportation has been killed by destructive railway competition, and that the attempt to eliminate destructive competition is the cause of railway consolidations. There are

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others who think that railway consolidations, as carried on by the natural processes of merger, absorption, purchase and the like, are accompanied by gross abuses and the imposition of intolerable burdens on the country, and that the process of consolidation must be controlled. It is not difficult to comprehend that the increase in transportation facilities, invested capital and number of employees will be, at least, in direct proportion to the increase in population and will probably exceed it. It is reasonable to expect that in twenty-five years more there will be invested in railways in the United States, from forty to fifty billions of dollars, with voting employees of four to five millions. There is a growing demand that the complete organization resulting from railway consolidations and railway growth be eliminated as a political factor, or the country will be in danger of its undue influence. On the other hand it is asserted that the unification of all transportation facilities into a transportation system is necessary to perfect economy and efficiency.

Some facts are poorly remembered; among these, the theory of our government—that all sovereignty is vested in the people. Therefore the people cannot *suffer* from any wrongs which legislation can correct, if they have the *will* to right them. The same power which made the constitution can unmake or amend it. It is

solely by the will of the people that private ownership in property exists. The tendency toward government ownership of transportation is world wide, and will infect this country to its everlasting damnation as a free republic, if means be not taken to obviate its necessity or propriety. These are facts but poorly remembered by the people, and, apparently, totally forgotten by aggregated wealth.

Finally, some facts, in justice to all, would better be recognized. A man is not necessarily a thief because he is engaged in the transportation business, or necessarily honest because he is a politician, or necessarily wise because he occupies a high position, or believes he should do so. The better way to judge ideas is by their merit, not their source. The American people are, as a whole, not unjust. The existence of a question assumes that there are at least two sides to it. Likewise it should not be forgotten that certain conflicting facts clash in the mind and lead equally honest men to opposite, and, to them, equally logical conclusions. Social life is a compromise between extremes, and the best method which human ingenuity has yet invented to settle a disputed issue is an impartial judicial tribunal, whose judgments the bad only fear. That which is ancient is likely to be wise, but if only it were wise, we should worship stocks and stones. However valuable a constitution may be, one which

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lags behind a country's development needs advancement. Lastly it may be suggested, that continuous agitation of a nervous patient is more detrimental than a surgical operation.

With this résumé of conclusions, allegations and ideas (grown and growing) concerning transportation and allied subjects, gathered from the press, of all colors, from magazines, from public speakers, in and out of legislatures, employed and unemployed, from reports, governmental and other, and from the works of learned writers, with an occasional notion of the author, let us proceed at once to the examination of the following questions directly related to our existing transportation system:

Does it afford the measure of safety which it should?

Is it at all times adequate?

Is it economical alike to investors and to the country?

Is its capitalization honest?

Does it serve all persons and all places on uniform terms?

Does it receive a fair return, and only a fair return, on its honest investment?

Is its management and control such as to prevent its use as a means of illegal gain?

Is it free from the accusation of a corrupting influence on American political life?

PART I

THE WRONG IN OUR TRANSPORTATION
SYSTEM

IS OUR RAILWAY SYSTEM SAFE?

An apology for railway accidents

LIVING is itself a dangerous occupation. Moving about adds to the danger of mere living, and whirling through space at thirty, fifty, seventy, ninety miles an hour, in ponderous machines, whose suddenly blocked energy smashes to smithereens themselves and their obstructions—this raises danger to the limit. He who seeks absolute immunity from accidents, had best sit out his time under his own fig tree. If he would become a moving particle in this over-energized world, let him expect nothing less than to be bumped. Steam, which moves the train, is a dangerous element; the train is a composite of many parts, wherein one out of harmony may wreck the whole; hidden defects in wheels, axles, rails will escape the most practiced, not to say scientific, eye; mortal men who use, and put themselves in the way of being hurt by, these instru-

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ments of destruction, are not overscrupulous in the care of themselves; and, finally, the physical operations of railroads are guided and governed by mere men, with senses too often overstrained for clear perception and dulled to danger by too constantly facing it. Seeing all this, the marvel is, not that railway accidents happen, but that there are not more, and more fatal, accidents. I say this much in favor of the iron horse, the load he pulls and his drivers, because with all good things which relate to transportation, I am in hearty sympathy. To say anything ill of it is to hurt myself.

Demanded degree of railway safety

What, then, is the just requirement of the railway so far as safety is concerned? Surely it is not that total immunity from accidents should be absolutely guaranteed; for that is more than can be required of mortal agencies and foresight. But this we may demand: that the operation of the railway shall be made as safe as human knowledge, ingenuity, care and money can make it. Mark you, I do not say "as safe as ordinary knowledge, ordinary ingenuity, ordinary care and the reasonable expenditure of money can make it"; ordinary care and reasonable expenditure will not suffice in railway operation, the highest care and the necessary expenditure should be the rule.

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The best obtainable is what we may demand. For instance, the difference of five dollars a ton should not stand between a rail that is safer and one that is not so safe.

Degree of railway safety afforded

Now, for the present, we ask you of the railway: "Have you given us the highest degree of safety obtainable?" Let us not quibble over little things, but have recourse only to the broadest facts. If you say you have given us this highest order of safety, then how shall you answer these questions? "Is the earth of America less fitted to build railroads on than the earth of Europe? Do our forests grow timber that is not as sound as Europe's? Do not our forges turn out as good steel as those of England? Are our engineers less capable?" Of course you will answer: "Our earth is as stable, our timbers as sound, our steel as good and our engineers as capable." "Then why do our railways kill and maim ten men to one that is killed and maimed by those of Europe?"

"Does it not make you ashamed that we, who boast of all greatness, must each year stare at this pitiful record,—108,324 persons injured by our railroads in 1906, of whom 10,618 were killed? Whence will you recruit your skilled trainmen when you kill 2000 and injure 30,000 each year?"

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One killed for every 133 employed! One injured for every nine employed! Really, is this war or railroading? What army do you know of that keeps one in nine of its soldiers in the hospital?" I know what you will say. You will say: "It will take money, billions of money, to make our railways as safe as they should and could be made. Give us the money and let us charge rates which will yield a fair return, and Americans will give to America a transportation system that will make all the world marvel at its safety." If this be true, and it is, then why do you not stop employing illegitimate arguments with law-makers, and turn to their education?

And you who have the immediate charge of countless millions of human lives—yes and of your own lives, too,—what shall you say? Are the railway operatives of Europe better than those of America? I know you will scout the idea. You will say, and none will disagree with you, that in intelligence, ingenuity, initiative and endurance, you are the superiors of any trainmen in the world. Yes, but does your superiority extend to the prime qualities of obedience and discipline? Are you not too confident of yourselves, too wilful, too apt to say, "this rule was made to be broken," too loyal to your comrades to protect even your own lives, rather than expose their negligence or disobedience? But I see I am forgetting. In this part I had intended only to be a complainer.

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However, in the matter of the killing of human beings by railroads, there is one important fact which those who seek for mere bloody sensation deliberately suppress, and in justice it should be mentioned. Of the ten thousand odd who were killed in 1906, about one-half were trespassing on railroad property. For obvious reasons, not many were merely injured in this occupation. Now, I confess a lack of sympathy for those who seek the road-bed of a railway as a sleeping, promenading or loitering place. Generally speaking, their deaths were about due anyway. The pity of it is that the iron horse should be charged with their execution. These aside, however, it cannot be denied that in this country there is a veritable slaughter of trainmen and other employees, of passengers and of others rightly upon railroad property, and a destruction of freight which is appalling. The comparison with European railways, in this regard, is perfectly legitimate, and, I may add, it is about the only legitimate comparison which can be made between the European and the American railway systems. If you take 100 as absolute safety, then our railways afford us but 10% of possible safety against 90% for Europe.

It is not in the nature of the American to rest satisfied with what is inferior. Foremost in everything which relates to mechanical appliances, we are behind all in safety. Our railway equip-

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ment is to that of Europe as a carriage to a lumber wagon. In fact we have taught them all they know, or, apparently, are capable of learning about the comfort of travel. Only in safety are we so inferior. To attempt to ascertain why this is so is one of the purposes of this book. Let us not boast that we are killed in comfort.

IS OUR RAILWAY SYSTEM ADEQUATE?

Authoritative statement of inadequacy of equipment

This is written in December, 1908. This otherwise unimportant fact is mentioned because, to raise the question of the adequacy of our railway system at this time, seems to smack of irony. With from 300,000 to 500,000 freight cars standing idle during the past twelve months, the system would seem to be rather overloaded with adequacy. But how short are our memories! We should not forget that during the two years preceding the panic of 1907, our railway freight system literally broke down under the enormous loads of freight offered it. Or, if you wish your memories refreshed, turn to pages 16, 17, 18, of the *Report of the Interstate Commerce Commission* for 1906, wherein you will find it stated as a fact by the highest authority, that "A car famine prevails which brings distress in almost every section and in some localities amounts to a calam-

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ity." Likewise, that in the Northwest farmers could not ship their grain; that in the Southwest and trans-Missouri region, "tens of thousands of live animals are denied movement to the consuming markets," "while throughout the Middle West and Atlantic seaboard the shortage of cars for manufactured articles and miscellaneous merchandise has become a matter of serious concern." Do you think that because we have had a panic, the growth and development of this country have reached their end? True, the panic entailed enormous losses, but this at least we can say: It did not rob our fields of one jot of their fertility nor take a pound of mineral from the earth. It temporarily curtailed our consuming capacity, but did not touch our capacity for production. With the return of the former the latter will return, and the conditions of 1905-6-7 will again be with us.

Estimated inadequacy thirty-three per cent

But I am afraid to rely upon my own deductions concerning the adequacy of our railway system. Therefore I again turn to "authority." Before an audience of three thousand people, specially interested in all that relates to transportation, I heard one, who is, perhaps, the foremost—certainly the most respected—railroad man in this country, solemnly allege, that our railway

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system has to-day but two-thirds the capacity required of it by the needs of the country; and recently I read that another great railway president had said the railroads require six billion dollars expenditure to meet required developments. These statements are singularly in harmony, for whether we view the matter from the standpoint of capital to be invested, or of facilities to be increased, each requires about one-third more than is at present employed.

Lack of expedition in freight service

But in the matter of adequacy, it is not only that the whole railway system is thirty-three per cent behind the development of the country. Railway transportation is nothing if not expeditious. Now, I am about to make a statement which no man will believe, and therefore I quote it. "A significant fact in this connection is the small average mileage made by cars in freight service, *amounting to only 23 miles a day.*" "Monstrous fabricator!" you say. If this statement be not true take away their offices, for it is quoted *verbatim*, minus the italics, from the 1906 Report of the Honorable Commissioners of Interstate Commerce, page 16. It is a fact that, on the average, our freight cars go rushing over the country at the reckless break-neck speed of one mile an hour. I do not doubt it, for was I not

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nearly two months in getting a box—weight 150 lbs.—one thousand miles? And did I not go to the local freight office so often that there was established an intimate friendship with the agent? Yes, and have not I and many another man shipped tons of heavy freight by express, to avoid the losses incident to slow freight deliveries?

Twenty-three twenty-four-hundredths of a mile per hour! Why a traction road engine will make three miles an hour. A flatboat will float down stream two miles an hour—I fancy. A Nile boat going up stream, with all the crew asleep, would be ashamed to make so little speed as an American freight car. Recently I was told by a manager of a first-class road, that it takes thirty days to get a car load of grain from Buffalo to New York! At twenty-three miles a day you might, if you did not die of impatience, get freight from New York to San Francisco in one hundred and forty days.

Of course, everything is not so bad as it appears from these statements. There are fast freights in the United States—sixty-hour trains from New York to Chicago—through freights between all important points. But what occurs to me is this: if twenty-three miles a day be the average, and if this average includes the fast trains, then, in the name of sweet charity, what must be the speed of the really slow trains? Of course, no

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one will imagine that freight trains, when actually moving, make less than a mile an hour. That would be too ridiculous. The main fact is, that, either the freight itself from the time it is delivered to the carrier, or the car, is not in actual movement toward its destination a quarter—nay, often, a tenth—of the time.

Now what is the matter? Why this farce of freight transportation, this snail's pace, this developer of heart-breaking and brain-destroying impatience? Is it deliberate spite work on the part of railways? No, emphatically no. The truth is, they are doing about as well as they can with the facilities they have to work with. They cannot afford to pound their light road-beds into a pulp, by driving, at a high speed, the enormously heavy trains which do the freight carrying of this country; and they cannot afford to pound the life out of their heavy equipment, by driving it at high speed over their light road-beds and, usually (considering the weight of equipment), light rails; and they cannot afford to run fast, and carry freight at the ridiculous average of seven and one-half mills per ton per mile; in short, they cannot afford to give first-class freight service.

But these "cannot affords" do not begin to reach the root of the trouble. The simple unqualified truth is, that we are a nation of boasters. We boast of the wonderful number of miles of

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railways we have—greater than all the rest of the world, I believe. I am so tired hearing it that I have not the patience to look it up. And we boast of the wonderful speed of our passenger trains. And we boast of the billions of tons of freight carried. And we boast, and boast, and boast. It is only occasionally, when we stop to inquire into actual facts,—when we learn that we kill ten times as many people as the roads of other countries; that freight congestion is at times such as to amount to a calamity; that our freight trains creep and crawl, instead of run—that we must descend from our boasting platform and admit that our transportation system as a whole is miserably deficient.

What an adequate transportation system means

Now, what is meant by an “adequate” transportation system? Any schoolboy will tell you that it is a transportation system which can *at all times* respond to the requirements of the country. Nor is the problem one of complexity. Essentially it is a question of finance: on the part of railways, the raising of capital necessary to make an adequate system; on the part of the public, the payment of rates necessary to support an adequate system. I was about to add: allow the rates and the capital will be had for the asking. But let us not be in too great a hurry to assert

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this, until we find out how the railways have used the money which has been furnished them in the past. In the meantime, it is certain there are four directions in which developments must be made before adequacy—and, incidentally, greater safety—will be assured.

1.—Road-beds must be made more secure, more permanent. There are tens of thousands of miles of American railways that are either not ballasted at all, or so imperfectly as not to deserve the name. And all bridges must be made of stone or steel.

2.—Trackage must be enormously increased, and wherever the business is such as to make even a half-way decent excuse for doing so, the roads must be doubled tracked. Doubling the trackage of a road quadruples its capacity.

3.—Equipment must be sufficient to satisfy requirements at any and all times, even though this involves periods of idleness for a large percentage of it. Above all things, transportation requires that production be deliverable at the opportune time. It may be unfortunate that crops do not ripen all the year around. But in this, transportation must bow to nature.

4.—But all the road-beds, trackage and equipment which money could make and buy would be useless expenditures, unless the facilities for handling freight in yards, and terminal facilities generally, be increased accordingly. T

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is where the congestion becomes unendurable. Strange as it seems, it has taken railroad men half a century to fully realize the fact that a railroad is no better than its terminals. You might as well build a railroad to the north pole, as between Chicago and New York unless you had appropriate terminal facilities. And these are enormously expensive—so costly, in fact, that it is said one-third of the total cost of a road one thousand miles in length would be consumed in providing terminals at New York.

Stated briefly, then, our question is, whether the American people are willing to put up with an unsafe, inferior, inadequate transportation system, or have the intelligence to pay for one that will supply their needs—whether they have the sense to see that the very best investment which a country can make, is in the best transportation system which money can produce. I say advisedly, “a country,” for there is nothing truer than this: that looked at from whatever standpoint its transportation system is and ever must remain a charge upon the country. And now, before asking the people to lend this additional six billions, and before asking them to continue, *for all time*, to furnish money for the continuous development of their transportation system; let us inquire of our railway promoters, builders and operators, what sort of *stewards* they have been of the billions which have been loaned them

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in the past—how they have managed this greatest of all estates and trusts.

IS OUR RAILWAY SYSTEM ECONOMICAL?

Misleading conceptions of railway economy

Before considering whether our transportation system is as economical as it could and should be made, it seems necessary to clearly differentiate that problem from the aspect of the railway as an economic *factor* in industrial progress and civilization.

There are certain utterly fallacious, yet popular and effective, arguments constantly interjected into this problem, which but serve to distract us from its proper consideration, and cause us to resign ourselves to the persistence of known wrongs. For instance, we often hear honest railway enthusiasts, as well as those who are paid for their words, compare present with past means of transportation. Reclining in luxurious cars, crossing the continent in a few days, with every comfort, we, at the same time, commiserate our ancestors, congratulate ourselves and forgive the railways for any- and everything. Seeing that history informs us that less than a hundred years ago, the necessary charges for hauling prohibited the carriage of heavy freight more than a very few miles; that in the memory of those still living, charges are not a tenth what they once

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were; that, upon the whole, rates are to-day less than half what they were thirty or forty years ago; that freight may now be carried so cheaply, that almost any production may be transported almost any distance, and find a profitable market; seeing all these advantages, it is concluded that our railway system of to-day must be inherently economical.

All such suggestions are, of course, deluding and misleading. To all these advantages we are entitled as a matter of right. They are the results of the inventive genius of man, and for them we owe not one cent of obligation nor one suggestion of gratitude to the men who manage our transportation system. Legally and morally they are trustees, solemnly bound for the compensation they receive, if not for the great trust reposed in them, to afford us every advantage of travel and traffic which their minds can bring into being. All the advantages we enjoy have come to us along with grossly uneconomical methods, and it is not improbable that economical methods would insure still greater advantages.

Other fallacious suggestions have found lodgment in the mind, and great efforts are made to keep them there and make them grow; among these, that the errors of judgment and criminal practices of the past must be borne by the present, and, therefore, that those of the present must descend as heritages to future generations. Not

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only are the people of this present day, here, in the United States, entitled to have the railway with every facility which invention has developed, but they are likewise entitled to have it **unincumbered** by past mistakes or wrongdoing. Our railway system must be judged as it exists to-day. In the past it is supposed to have gotten its reward as it went along. If it did not, it was its own fault. Errors and crimes of the past cannot be added to capital account for the present and future to pay interest on. It is not done in any other department of life's activities. The cost of the house that the tornado destroys is not added to the value of the land. The mistakes of the farmer in planting the wrong kind of grain or trees do not add to the value of the farm he leaves his son. Bankruptcies are past losses. Only in our railway system are mistakes and crimes capitalized. Let us brush away these delusive arguments, and proceed to consider the railway upon its own merits.

Various aspects of railway economy

There are several standpoints from which may be viewed the problem of the economy of our transportation system. In one form or another it will be found cropping up in almost every page of this book, for it is identified with the entire transportation question.

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The railway system of a country presents itself in two important aspects: It is a means of transportation—a physical operation,—and it is a financial operation. The question of its economy involves both of these aspects. Considered as a mere means of transportation, it may be economical or wasteful alike to itself, to those who use it and to those who have their means invested in it. Considered as a financial operation, it may be economical or wasteful to itself, to its investors and to the country which supports it. It may be economical to those who immediately use it as a means of transportation, and yet grossly wasteful as a financial operation; as, for instance, where cut-throat rate-wars make low rates to shippers and bring bankruptcy to railways and losses to investors. It is possible that it may be economical as a financial operation, and yet grossly uneconomical as a means of transportation; as, for instance, when rates are higher than they need to be. It may be wasteful both as a means of transportation and as a financial operation, which it generally is. It may be economical both as a means of transportation and as a financial operation, which it rarely is. And yet it is only when it fulfills both these conditions, that a railway system may be said to be economical in the broadest and best sense.

Whether the system is economical or wasteful may be viewed from the standpoints of (1),

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those who manage it; (2), those who have capital invested in it; (3), those who have capital invested in other means of transportation; (4), those who use the system or other modes of transportation; and, finally, (5), from the standpoint of that rather indefinite quantity known as the "public" or the "country"; which includes all the people who are affected directly or indirectly by transportation, either as a means of carriage or as a financial operation, in their individual capacities and as units in organized society. Accordingly, we look for the figures showing whether the system is economical or wasteful, at the books of the system, the books of the investors, the books of investors in other modes of transportation, the books of shippers and finally at the books of the public or country at large.

Usual and narrow view of railway economy

I cannot regard it as otherwise than unfortunate, that those who have given this subject consideration—the learned writers, the legislators and the courts of justice—have had, or seem to have had, but two viewpoints, that of the managers and that of the shippers; and, consequently, have looked at but two sets of books, the books of the system and the books of the shippers. They have concerned themselves almost wholly with the cost of service to the transportation

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company, and whether the rates charged the shipper were reasonable; while, as a matter of fact, under the system which has been in vogue, the first of these matters is comparatively unimportant, and the second not possible to decide. The cost of a particular service to the carrier has never been the determining element in fixing the rates it has charged, and as to whether rates are in themselves reasonable, we have never had either basis or data for the determination of that question.

Now, if we are capable of taking the viewpoint of the investors in railways, the viewpoint of the investors in other modes of transportation and the viewpoint of the interested public, we will be able to see what the cost of our transportation system has been, as that cost appears upon the books of the nation. When we concentrate our mental vision upon the books of the nation, and look at the cost, loss and waste which our transportation system has entailed, is entailing and will continue to entail upon the country as a whole, the mind is staggered at their enormity, and the conclusion is irresistible that the system has been, is, and will continue to be, unless methods are changed, so utterly uneconomical, so disgracefully wasteful, that its past existence or continuance is nothing less than an insult to our intelligence as a people. We have not the data to justify us in saying what rates are reasonable,

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but we have, unfortunately, the data justifying this harsh criticism.

For the purpose of considering this problem of the economy of our transportation system, let us divide the subject as nearly as may be into (1) economy of transportation as a physical operation and (2) economy of transportation as a financial operation, giving typical examples of each.

Waste from lack of safety

Reference has been made to the loss of life, injuries to persons and destruction of property incident to the lack of safety in the operations of our railways. This loss brings with it an enormous financial loss in the form of railway property destroyed as well as damages voluntarily paid by the railways, and it makes necessary the maintenance of a great claims and legal staff and an endless chain of litigation, expensive alike to the companies and claimants. Apparently no statistics are available showing the amounts which the railways pay every year because of accidents to persons and destruction to property, nor are we informed what are the railway expenses for the maintenance of hospitals for their injured employees. So far as I am aware, we have the data covering just one item of loss—the actual value of the *railway property*

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destroyed as the result of collisions. For the year 1906, this item alone amounted to \$10,659,-189. Mark that this does not include damages paid by railways for property of shippers destroyed nor for persons killed or injured. It includes merely the destruction of equipment by collisions. If this sum represents the loss from one cause alone, the sum total of losses largely due to deficiency of safety must be startling.

For the period of eighteen years—1888-1906—the total number of persons killed by railways was 122,919 and the number injured 827,744. Each of these lives had a financial value to the nation, each person injured imposed a financial burden upon some one. One hundred thousand persons cannot be killed and maimed each year, without materially diminishing the national efficiency.¹ But attention is just now more particularly directed to economic waste from a purely transportation standpoint. It may be safely assumed that a billion dollars would not cover the losses which the railways have sustained in the last quarter of a century, directly due to lack of safety in their construction and operation.

But let it not be imagined that these losses fell upon the railway corporations. Looked at in a large way, it will be readily seen that these

¹ In 1907 the number was 122,855.

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were losses which the people were compelled to pay. For if the losses had not been sustained, perceptibly lower rates could have been charged the public. Moreover, if the money paid for the destruction of life and property had been applied to increasing the safety of the system, it would have done much in that direction. The \$10,659,189 which collisions alone cost the railways in the loss of their own property in 1906, would, economically and honestly spent, have double tracked hundreds of miles of road.

Or, look at it from another standpoint. In the year 1906 the surplus earnings of the entire railway system were about \$90,000,000. Thus it will be seen that nearly 11% of what would have been surplus earnings was consumed in the loss of railway property following collisions alone. I have chosen collisions as typical of this form of railway waste, because there never yet occurred a collision which was not avoidable.

Waste from inadequate transportation facilities

Let us turn now to another typical form of railway waste resulting in loss to both the system and the country, and which springs from inadequate transportation facilities. I have heard it alleged that the losses arising from the inability of the railways to handle the country's production in 1905-6-7 would reach a round billion dollars.

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Our country is so vast and these losses were distributed so uniformly, that it is almost impossible to conceive their enormity. Directly or indirectly they reached every one. Grain raisers, cattle raisers, cattle feeders, manufacturers, merchants, builders, laborers, were all affected. If to the direct losses occasioned by inability to carry freight at all, or at the opportune time, there be added the ever recurring losses incident to delays in delivering freight intended for specific purposes at specific times, you have another source of loss, the aggregate of which is well-nigh incalculable. Building is delayed waiting for structural material, expensive mechanics are kept on hand at loss to the builder or, worse still, laid off at loss to the laborer; but why go through the catalogue, when every man from mine owner to farmer has been a sufferer?

Waste from indirect freight carriage

It is ordinarily supposed that a straight line is the shortest distance between two points. Every day the railways ignore this truism. They haul freight in all sorts of roundabout ways when there are direct ways in which it could be carried. I do not refer to any such trifling out-of-the-way hauls as twenty or fifty miles, but to roundabouts of five hundred or even a thousand miles. Freight is carried from

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Chicago to San Francisco via New Orleans, which is nearly a thousand miles out of the direct railway route. Illustrations of this kind might be multiplied by the hundred. Now, one cannot be so ignorant, as not to know that such diversions of traffic entail additional cost somewhere. It may be that by some legerdemain, a particular road may justify itself in this practice; but one has only to remember how, if all freight were carried out of its course as some freight is now, the actual cost of transportation would soon be doubled, to see that it cannot but be uneconomical to do so in any event.

Does it not cost money to run freight trains? "Yes," you will say, "at least two dollars per mile." Then if a freight train be diverted 1000 miles from its direct course, does not that action throw away \$2000? If 500 miles \$1000? If 50 miles \$100? And have you not by this action depleted the earning power of some other road which might have made the haul direct? And if so, have you not depleted the earning power of the whole transportation system? Add together, if you can, the several deflections from due and straight courses in a year and multiply that by twenty, and you will have fabulous figures representing the economic waste in the last twenty years, due directly to the failure of railroads to regard the maxim that a straight line is the shortest distance between two points.

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Railway excuses for waste from indirect carriage

But you of the railroads ask if any line shall be denied the right to build itself up, even at the expense of another. "Shall we be denied the right severally to seek, get and do business where we can? Does not the country demand that we each remain independent, and that we compete with one another? Is not the whole force of this mighty nation now being brought to bear upon us, to force us to compete one with the other, even though by doing so we drive each other into bankruptcy? And is it not competition when, at so great a loss and sacrifice, we take freight from another road and haul it over our own, even though we haul it a thousand miles out of the way to do so?" Hail, therefore, mighty competition! Blest and reposeful theory of statesmen and theoretical economists, hail! Lives there a man—railroad man, statesman, farmerman—so dull that he cannot see that if, instead of having a jumble of roads and systems each trying to build itself up at the expense of the other, we had a *transportation system* one and indivisible, not a pound of freight would ever be carried except by the directest course that nature would allow?

This catalogue of economic waste due to the physical operation of railways might be largely extended. But let us sheer off in the

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direction of waste due to the railway as a financial operation.

Financial waste from duplication of railways

It is the tendency of half-lunatic human nature to duplicate business enterprises which have shown success. To the majority disaster follows of necessity. Apprehended bankruptcy universally throws business methods to the winds. Actual bankruptcy destroys the last fiber of economic responsibility. Bankruptcy is the very paradise of the business cut-throat. Of all this the upbuilding of our railway system has afforded remarkable illustrations. Suppose a certain territory to be supplied with sufficient railway facilities. Suppose another railway builds into that same territory. Now, what happens? A railway once built can never be abandoned or destroyed. At least, I believe, such a thing never did happen to a railway of any consequence. Then the territory has two railways—a very necessary one and a very superfluous one, for, most likely, the business is barely sufficient to support one. If both are to be supported it must be by a raise in rates which, however, rarely happens. If the business is divided between them, as always happens to some extent, the revenues of the first road are reduced below the remunerative point, while the new road ekes out

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a miserable existence. If a drastic rate war follows, as has usually been the case, the road with the shortest purse soon finds itself in the possession of a receiver. Indeed, the stronger road is lucky if it escapes the same result, especially after the receiver for the new road is appointed, for a receivership is a very paradise of operative irresponsibility. Now who has been benefited by this adventure? Certainly not the investors in the original road; for dividends, before regularly paid, have since been remitted or paid in doubtful obligations of the company. They are fortunate, indeed, if the capital itself has not been seriously imperiled. Certainly not the investors in the new road, because no dividends were ever paid, the bonds have defaulted, and the only hope of their holders ever getting anything lies in the possible chance that the road will not be eaten up by receiver's certificates.

"Oh!" you say, "but the community has been benefited. It has two railways now—it has competition."

"What of that? Was not your old road able to handle all the business of its territory?"

"Yes."

"Is it easier, then, for your community to support two roads than one?"

"No: but the new road brought lower rates, and the old road was spurred on into giving better service."

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"And was the old road in better condition to give you lower rates and better service, after it was deprived of part of its revenue by the competition of the new road, than it was before?"

"Of course not, but it did it just the same."

"But if your old road was able to give you a better service and lower rates, when it had a monopoly of the business, why did not the community compel it to give the better service and the lower rates?"

"We tried it. In fact it has been a political issue ever since I can remember. But the railway always controlled the legislature or the commission or the court, whichever was most necessary."

And hence the people have come to look for no relief from railway monopoly except through competition, utterly unmindful of the fact that in the end they had two or more railways to fight and support, instead of one.

But at present, the endeavor is to point out that the building of an unneeded road cannot but result in economic waste in some direction. Almost invariably it brings losses to investors, and becomes a burden on the territory into which it is projected. You think that because the loss falls primarily on the investors you do not care: their loss helps you. You are mistaken. Economic waste never dies. It simply spreads and diffuses itself until it is no longer noticeable.

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But rest assured that you will not escape your share of it.

Now this building of railways into territories already supplied has characterized the development of our railway system. The people encouraged such uneconomical construction, not dreaming that they could be burdened by too many railways. The net result of this method of railway duplication, working in perfect harmony with other economic wastes, has been, that, one time or another, most of our railways have passed through bankruptcy, with consequent disastrous losses to the country.

Economic waste from railways killing water transportation

Again, if there exists a different and cheaper mode of transportation for some kinds of freight than by rail, and railways are enabled, by some means, to destroy this cheaper mode of transportation—to kill it so effectually that it cannot be revived—there result serious loss and waste in many directions. The capital invested in the cheaper mode of transportation is lost; the railway, while killing its rival, loses money, and the public permanently loses the cheaper facilities. For once the railway has completed its work of destruction, and the people have had time to forget, rates are raised.

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Why, when the rates are raised, does not the older and cheaper transportation revive? Because of the constant menace held over it by the railway to again reduce rates below the profit point. In this way the railway system has destroyed a large amount of capital invested in inland and coast water transportation. It has, at the same time, made this destruction the excuse for sundry practices of a most inequitable nature, and the country has lost, or is in process of losing, one of its most valuable assets,—cheap water transportation. How has a dearer mode of transportation been able to supplant a cheaper mode? In two ways, one of which was criminal and the other pitiful.

An industry which has sundry sources of revenue and which covers a large territory, can always kill another kindred industry which has only one source of revenue or is confined to a narrow territory. The great industry can carry on business at a loss in its narrow competitive territory, while recouping its losses in its wide territory, until its rival is killed. In this way have all great monopolies destroyed their single-handed rivals. But what we consider criminal in the trade monopoly, we consider right in the transportation monopoly. It has destroyed and is destroying water carriage, partly because of the relatively wider field open to its operations, partly because of its capacity to recoup its losses

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in other directions, but chiefly, perhaps, because a stupid government has not only sat by and seen one of its important and cheap means of transportation killed, but has actually, *by law, encouraged that destruction*, and at the same time permitted the imposition of intolerable burdens and unjust discriminations upon millions of its people. This government has not only permitted the railway system, where it came in competition with water transportation, to carry freight at a price so far beneath cost as to kill the latter, but has actually allowed the railway to charge up its losses so sustained to other points along its lines which were beyond the reach of water competition. Could an act of more monumental stupidity be conceived? From the standpoint of economy it is sheer waste to allow our railway system to kill our water system. Of this, more hereafter.

DISHONEST RAILWAY CAPITALIZATION AND ECONOMIC WASTE

Entering still deeper into the domain of transportation as a financial operation, let us next inquire how the capital which built our railways was raised, how it was expended, and what the methods of railway financiering have been, are and will continue to be.

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Popular misconceptions concerning corporations and railway ownership

A few preliminary words are necessary. For instance, rather hazy conceptions are current concerning corporations. Instead of rightly regarding them as aggregates of individuals, sometimes numbering tens of thousands, who have combined their capital, sometimes reaching into the hundreds of millions, for the purpose of accomplishing what no one of them could have done alone; corporations have come to be looked upon as a species of commercial devil. A close partner of this conception is that our great corporations *are owned* by the men who manage them; men who in recent times it has become popular to refer to as the "predatory rich." It has become the custom to speak of the "Hill System of Railways," the "Harriman System," the "Gould System," the "Ryan System," the "Vanderbilt System," etc., etc., as though these men personally furnished the money to build the roads and are now their owners. So widespread seems this idea, that one hears from quarters where definite information ought not to be wanting, expressions to the effect that the railways of the United States are owned by the so-called "predatory rich" of this country.

A moment's consideration, however, should convince the most imaginative person of the

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utter impossibility of the idea that the men who in the past stood at the head of railway corporations, or those by whose names the systems are now known, ever could have provided the capital which built the roads; or that those now in power ever did, or now do, own the roads; or, relative to the total capital invested in them, any considerable part of them. The majority of the roads were built before the enormous private fortunes of the present day were dreamed of as possibilities. It should be sufficient to refer to the well-known fact, that most of the men who have been identified with our railroad building, started in life and, indeed, in the railway business, as comparatively poor men. With the exception of the last few years, when a few very rich men have gone in for railroad building just to provide themselves with occupation in their declining years; it is safe to say that the combined private fortunes of all the men who have been prominent in railway promotions, would not, at the time they began that business, have built and equipped a thousand miles of railroad.

Now, it is alleged that the capital invested in the railway system of this country, is upward of seventeen thousand millions of dollars. Call up the ghosts of all the departed railway kings, and then call to the witness stand all their living descendants, and then call all the men who are now directors, executive committees and presi-

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dents of our transportation systems and ask each of them this question: Of these seventeen thousand millions of dollars, how many in actual cold coin did you put into *road-bed, rails and rolling stock*? We do not ask you how many dollars you put into dead and rotten roads to galvanize them into life, nor how many dollars you have made by dealing in their securities, but how many you put into the actual work of railroad building? And the echo is the only answer. Was it a thousand millions? Let it be conceded as so much. Then who furnished the other sixteen thousand millions? Who is there that does not know these billions came from the savings of millions of people, in this and other countries? Will you say that it was furnished you by your bankers, your trust companies, your insurance companies, your savings depositories? Then we will ask, where did your bankers, your trust companies, your insurance companies and your savings institutions get the money they loaned you?

You see, from whatever standpoint you view the matter, you cannot escape the conclusion that it was the people's money, and not your own, that made, and made possible, our railway system. It is the people who bought, and who now buy, your bonds—the bonds which you know right well, built and still build the roads. Track these bonds through your bankers, your

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trust companies, your syndicates, your underwriters, and eventually you will find them in the hands of the people and the institutions which care for their savings. Let the people but stop buying them, and your financiering flickers out like a burnt up candle.

By "the people" I do not, of course, mean the very poor, nor the well-to-do, nor the moderately rich nor the very rich only. I mean all the people whose industry and saving have enabled them to acquire a surplus over immediate needs, and who, through some channel, have invested the surplus in supposedly good securities. This surplus, usually small in each individual case, aggregates an enormous sum. It must not be forgotten that about every ten years the entire wealth of the world passes through the hands of those who toil, and that some of it sticks to those hands, as appears from the nearly four thousand millions of deposits in our savings banks and the nearly twelve thousand millions of deposits in all institutions of deposit. It is safe to say that, easily, every ten years the railways pay out, directly and indirectly in wages, the total cost-value of our entire railway system.

The wonder has always been to me, why those who labor with their hands do not own all the wealth—all the industries—of this country. For if they but saved ten per cent of their wages, there is not an industry in the United States

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which, in three generations, would not be owned by those who do the actual work; provided, of course, they were not perennially robbed by the rottenness of the securities in which they invested their savings. But this is taking me a little in advance of my theme; not so very far, however, for the question now is: Who built and who own the railways of the United States?

Ownership of railway securities

Of course it is a recognized fact that the overwhelming majority of railway bonds, aggregating about nine billions of dollars, are held by the people. Those who manage our railways have a more profitable use for their money than investing it in securities yielding, say, four per cent. But it is not so generally known that railway stocks are also widely distributed.

It is said that the entire stocks of our railway corporations are bought and sold three times a year on the New York Stock Exchange. That is, the entire capital stock changes hands three times every year. Say ninety per cent of these sales are fictitious, yet if only ten per cent are genuine, it follows that thirty per cent of all our railway stocks change holders every year, and so, in less than three years and one-half, the entire capital stock changes hands. These facts I pray you to bear in mind.

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Now, what do the books of the railway corporations show as to the number of actual stockholders? From a high authority—Henry S. Haines (*Restrictive Railway Legislation*, 1906, p. 77)—I take the liberty to make the following quotation. "In 1897 the railroad capitalization was distributed among 950,000 stockholders," etc. If these figures be correct for that date, there must be a good many more stockholders now (1908) or, at least, were before our late panic. As of June 30, 1907, the total *capital stock* of all our railway corporations aggregated a round \$7,450,000,000. If this capital stock be divided, as it usually is, into shares of the par value of one hundred dollars each, then there were outstanding 74,500,000 shares of stock. If these were held by 1,000,000 stockholders, the average holding of each stockholder would be $74\frac{1}{2}$ shares?

I do not find it possible to believe that these figures are correct. To me it seems improbable that our railway shares are so widely distributed among the people. But if these estimates be half true—as I conceive to be most likely—what becomes of all this boisterous talk about our railways being owned by the "predatory rich?" Does it not seem rather more probable that the overwhelming majority of even railway stocks are owned by what, in contradistinction to the "predatory rich," we call the moderately poor?

But if we turn from these estimates of the

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total holdings to the actual number of shareholders in certain large railway corporations, we shall find our estimates quite verified. For instance, the Pennsylvania reported, in 1908, 58,736 known stockholders, or an average holding of 106 shares by each stockholder (par value \$50 per share). Are these 58,736 persons among the "predatory rich?" If so the number of that interesting class must greatly have multiplied since their last census was taken.

Railway ownership and railway control

One more fact, and that a fact of great significance, must be mentioned. Of the seven billions odd of railway stocks, about two and a quarter billions are owned by the railway corporations themselves. In other words, the railway corporations, chiefly the corporations controlling great railway systems, have bought the stock of one another, until the corporations themselves own about 30% of the total capital stock outstanding. And significant enough, the stock which they have bought is, for the most part, what is called "common stock," which has the peculiarity of being the stock which votes to elect directors.

Thus it will be seen that it is by no means necessary that the managers of corporations should, in their individual capacity, own the majority of the stock of the corporations which

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they control. It is quite sufficient that their corporation owns a control and that they, the managers, vote that control as they see proper. Moreover, the control of this vast amount of corporate stock enables the managers to exercise a potent influence upon the stock market, and when, in addition, as has been known to happen, the managers are given, or assume, power to use the surplus cash of their corporations in the stock market,—well, you will see, that while the people built and own their railway system, they have no more to say about its control, or how their investment shall be managed, than though they were inhabitants of Mars.

And now let us proceed to the question of economy in our transportation system as a financial operation.

The railway debt a charge on the nation

Many of the wrongs of the past may be buried and forgiven, but not such as perpetuate themselves. The books of the railways show that the total amount of their assets on the 30th day of June, 1907, was \$18,649,289,250. Splendid! Magnificent! Shall we not say we are rich when we have railway assets alone valued at eighteen billions? Alas! what a pity it is that there are two sides to an account. No sooner am I puffed up by the gorgeous showing of this asset side of the account,

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than I am completely deflated by the liability side. For our railways owe \$18,649,289,250. Here is the Janus-faced monster that you may see for yourself.

ASSETS

Cost R. R. and Equipment.....	\$13,364,275,191
Stocks & Bonds owned.....	2,884,031,173
R. Estate & other Invest's.....	738,843,199
Cash, Bills Rec. & C't. Accts.....	979,730,908
Materials & Supplies.....	224,237,534
Other Assets.....	208,171,082
Sinking Funds.....	159,592,350
Profit & Loss.....	90,407,813
	\$18,649,289,250

LIABILITIES

Capital Stock.....	7,458,126,785
Bonded Debt.....	8,228,245,257
Other Bond Obligations.....	815,041,027
Accrued Liabilities.....	94,938,347
Misc. Liabilities.....	75,450,828
Bills Payab'e & C't. Accts.....	857,734,167
Sinking Funds, etc.....	239,727,545
Profit & Loss.....	880,025,294
	\$18,649,289,250

All book-keeping quibbles aside, is not this very much like a man who owns a farm which he values at \$10,000 and for which he owes \$10,000?

Now the significance of this balance sheet shines out of its two faces so any man who has eyes can see it. In the first place, it is evident we have acquired our railway system by borrowing money. In the second place, it is equally evident we have acquired an enormous indebtedness. Yes, but

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who owes this debt? There's the rub. You say it is the railroads, of course. Not so: it is as much the debt of the nation as is its national debt. Absurd, you say. But wait a minute. Must the nation have ships of war? Yes. Well, which could the nation dispense with and suffer least, its battle-ships or its railways? You see the railway is a national necessity. Sanity would enable us to get along without battle-ships, but the saner we are the more railways we require.

"But," you ask, "may not railways go into bankruptcy and thus their indebtedness be wiped out?"

"Yes, verily, a railway may go into bankruptcy and its investors may lose every blessed dollar they put into it, but you are wrong in supposing that the indebtedness can be wiped out."

The unique thing about a railway is that bankruptcy does not wipe out its debts. I say this not because in past history, our railways have nearly always emerged from the bankruptcy court loaded with a greater debt than when they entered its sacred portals; for that, though true, would be mere quibbling. I say it because national indebtedness is inherent in the railway as an institution. Any other industry may become bankrupt and quit, die, cease to exist. But a railroad whether bankrupt or solvent must continue to live—it must be operated, maintained and sustained.

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If you never paid a dollar of the debt of the railways and if you never paid a cent of interest on that debt nor a cent of dividend, the nation would still have to pay about three-fourths as much as it now pays for the mere pleasure of having railways. To keep our railway system alive and in working order—none too good—cost last year \$1,769,417,903. Even if we were so contemptible as to deny to invested capital a cent of return, no amount of political buncombe can relieve the nation of the cost of operation and maintenance. Last year the nation paid \$2,602-757,503 as the total cost to it of its railways for that year. This was about 14.46% interest on the capital alleged to be invested in our railway system. Of this amount about 10½% was paid for the actual operation of the system; which was a charge as essentially national, and a lot more remunerative to the people, than the cost of running the national government. The remainder—less than 4%—was paid as interest on the capital invested and, *provided the investment was honest*, it was as honorable a charge upon the nation as was the payment of the interest on our national debt.

Now, since the railroad is a national necessity, since its maintenance is an inevitable fixed charge upon the nation, since the system was acquired with borrowed capital, and since the nation is honorably bound to allow fair interest on the

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borrowed capital; we may next inquire whether the system was economically acquired, and, more especially, whether the acquisition of additional railway facilities is to be economical.

Economic waste in acquisition of railway system

We say if a man pays two dollars for what he could as readily have obtained for one, that he is not practicing economy. Also, if a man can himself go to his banker and borrow money, we would call him strange if he paid his broker 5% to do the same thing for him; if he paid his broker 10%, we would call him grossly wasteful of his means; if he paid 25%, we would call him a fool; and if he paid 40%, we would say he should certainly have a guardian appointed. Yet such a man is the American people. The thing the man bought is his railway system; he bought it with borrowed money; the broker he employed was the railway promoter, and he paid him 40% commission. At least this is so alleged by those who pretend to know. They tell us that not more than 75% of the nine billions of dollars of bonds which our railway system owes to-day, ever found its way into the treasury of the railway corporations, or was actually expended in the construction of railways. And they tell us that for the seven billions and more of stock that has been issued, the railway corporations never received

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more than 50% in cash or other things of value. And they tell us that the American people are honorably bound *forever and forever* to pay interest at a reasonable rate on the face value of these bonds and stocks.

There are some people who even say worse things than these. They say that the railways were built out of the bonds and the money derived from their sale, and that the stock was given away as a bonus. Of course they do not say these things of all our railways, but they say it of our railway system as a whole. Personally I do not know, except in a most general way, whether these allegations are true, but if they are true, then we have certainly acquired our railways in a most uneconomical way, *provided we could have gotten them by means which would have saved the promoters' commission*. But while I do not know whether these things are true of the remote past, I do know of certain recent and present practices which lend color to the allegations.

INCREASE OF RAILWAY FACILITIES AND RAILWAY DEBT

Fundamental principles

I assume this to be a fundamental principle of railway economics, to wit: That railway facilities should increase in proportion to the

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increase of railway debt. In this respect a railway does not differ from any other kind of industry, or, for that matter, from an individual. If debt increases out of proportion to the value of something acquired, which represents the debt, there is lack of economy somewhere. In the case of the railway this something acquired is transportation facilities. This is a matter of very great importance to the public, not only because the public requires a fairly constant increase of railway facilities equal to the development of the country, but also because it has to foot the bill.

The exact question involved

It is not my purpose to consider here the vexed question of how much it actually costs per mile to build, or produce, a railway, nor the still more vexed question of how much it has actually cost to bring our railways into existence. The question is now: What is the alleged comparative cost of producing our railways at different periods of the entire railway era? In other words, we are to compare the increase of railway facilities with the alleged cost of such increase.

The first fact—the increase of railway facilities—is fairly well known. For the second fact—the alleged cost of the facilities—we are obliged to rely entirely upon the books kept by the railways.

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I cannot guarantee that these books disclose the exact facts, but this much may be stated without fear of contradiction, that the facts which they do disclose are not *unfair* to the railways. At any rate, they cannot complain if we use the facts which they furnish.

The periods chosen for the purpose of this comparison are three, as follows: the first period covers the time from the beginning of railway making down to 1890 (sometimes 1892); the second, the ten-year period, 1890-1900, and the third, the six-year period, 1900-1906. The selection of these periods has not been arbitrary. As is well known, the Interstate Commerce Commission was, by the law of 1887, granted power to collect all the facts of importance bearing upon railway problems; but it was not until 1890 that the statisticians got into good working shape. Since that time they have furnished us fairly consistent data each year, and there is a chance now to institute comparisons. Unfortunately it was not until 1892 that the consolidated, or general, railway balance sheet disclosed the number of miles covered by it. It is therefore worthless for purposes of comparison before that date.

The measure or unit of railway facilities

I have found no little difficulty in satisfying

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myself as to a proper yardstick, or unit, whereby to measure railway facilities, yet if we are to make any progress in this, as in all other matters, we must first agree upon some standard of measurement. It is not so very important what this unit is, so long as we uniformly employ it in all comparisons, but if we are able to ascertain some one facility which may be taken fairly to represent all other facilities, that one will be the most appropriate unit. Naturally one turns to "the mile" of track as the unit of carrying capacity, and I believe it has been universally so employed. If, therefore, at a certain period you have a certain number of miles of track, and at another period you have an increased mileage, you say your railway facilities have increased by the increase in mileage. This means, of course, that all the other facilities which go to make up a railway have increased accordingly. But when you come to consider the question of "cost," this does not necessarily mean that the actual cost of each additional mile of road has increased, but that you have saddled upon "the mile," the total cost of all other facilities. In the calculations which follow, I will therefore take the mileage of single track as representing the aggregate of railway facilities, and the increase in such mileage in one period over a preced-

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ing period as representing the increase in facilities.¹

The measure or unit of railway "cost"

If we knew the *actual cost* of the production of our railways at different periods, we would simply divide the aggregate cost by the aggregate number of miles, and thus arrive at the comparative cost per mile for the different periods. But we do not know the actual cost, and therefore men have pondered much to know what sum should be divided by mileage in order to reach a fair knowledge of the cost per mile. Now, so far as I know, there are five, and only five, possible methods of reaching this conclusion, and, so far as this book is concerned, it makes but little

¹ It would seem that this paragraph is sufficiently clear, but it has been suggested by a friend, conversant with railway matters, that it may be open to the criticism that, in the writer's mind, railway facilities consist of track and equipment only; and it has been suggested that railway facilities be more fully defined. Of course, they consist not only of equipment and single, or main track, but of all other trackage—second tracks, third tracks, etc., side tracks, spur tracks, switch tracks, yard tracks, etc. Likewise, they include terminals, stations, freight sheds, round houses, machine shops, yards, etc. In short, "facilities" include every material item which may enter into the physical operations of railways, and, therefore, they include docks, boats, lighters and barges as well as tunnels, such as are now being constructed under the Hudson River.

But railway facilities do not, in my opinion, include real estate owned by railways, but not used in railway operation,

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difference which of these methods be followed. But in fairness to all, and especially to the railways, I purpose to set forth all the methods. They may be briefly described as follows:

1.—The railways have kept what is called a “cost of road” account. In this account is supposed to have been entered every item of legitimate railway cost which appertained to the making of a railway ready for its rolling stock. If, therefore, you divide the aggregate of the “cost of road” account by the aggregate mileage, you will get what the railways claim it has cost to produce our railways exclusive of equipment. This we will call—

CALCULATION NO. 1,

based on the alleged “cost of roads” as shown

nor coal mines, except such as are used to provide the company with fuel for its own use; and it would require a lively imagination to bring into the list of railway facilities, stocks and bonds of other railways and manufacturing industries owned by railway corporations.

Railway facilities must, therefore, be clearly distinguished from railway assets, which latter may include anything which a corporation engaged in transportation may be allowed to own. Facilities include such of these assets as are actually employed in transportation and, therefore, serve a public purpose.

The important point to be borne in mind at present is, that in attempting to find a unit measure of railway facilities, and of their increase, we charge the single trackage not only with its own proper cost but with the cost of every other legitimate facility acquired by our railways.

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by the consolidated balance sheets of the railways (See *U. S. Statistics of Railways*, 1892, p. 68; 1900, p. 96; 1906, p. 105). Comparative for the periods to 1892, 1892-1900, 1900-1906.

Mileage Covered

Balance sheet	1892,	143,516		
"	"	1900,	181,437;	increase over 1892, 37,921 miles
"	"	1906,	208,310;	" " 1900, 26,873 "

Cost of roads

1892,	\$8,078,516,736		
1900,	9,674,952,371;	increase over 1892,	\$1,596,435,635
1906,	11,588,922,421;	" " 1900,	1,913,970,050

Cost of total mileage prior to 1892.

\$8,078,516,736 ÷ 143,516 (miles) = \$56,290 per mile

Cost of mileage acquired 1892-1900.

\$1,596,435,635 ÷ 37,921 (miles acquired) = \$42,098 per mile

Cost of mileage acquired 1900-1906.

\$1,913,970,050 ÷ 26,873 (miles acquired) = \$71,222 per mile

Increased cost of third period over first \$14,930 per mile

Increased cost of third period over second \$29,124 " "

2.—In addition to the account called "cost of road," the railways have kept an account called "cost of equipment." The joint accounts are supposed to include every item of cost entering into the making and equipment of our railways. The division of the aggregate of these accounts by the acquired mileage during any period, will show the alleged cost of the mile of road; the cost of equipment being thus saddled onto mileage. This we will call—

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CALCULATION NO. 2,

based on alleged "cost of road and equipment" accounts as shown by the consolidated balance sheets of the railways as they appear in the *U. S. Statistics of Railways*. Comparative for the periods to 1892, 1892-1900, 1900-1906.

The mileage covered is the same as in calculation No. 1.

Cost of roads and equipment.

1892, \$8,564,394.830
1900, 10,263,313.400; increase over 1892, \$1,698,918.570
1906, 12,420,287.938; " " 1900, 2,156,974.538

Cost of road and equipment to 1892.

$$\text{\$8,564,394,830} \div 143,516 \text{ (miles)} = \text{\$59,675 per mile}$$

Cost of road and equipment acquired 1892-1900.

$$\text{\$1,698,918,570} \div 37,921 \text{ (miles acquired)} = \text{\$44,801 per mile}$$

Cost of road and equipment acquired 1900-1906.

$$\text{\$2,156,974,538} \div 26,873 \text{ (miles acquired)} = \text{\$80,265 per mile}$$

Increased cost of third period over first	\$20,590 per mile
“ “ “ “ “ second	\$35,464 per mile

3.—The third method of ascertaining what our railways have cost is entirely different from the first two methods. They were based on the supposed cost of acquiring the roads. The third method is based on the amount of "stocks and bonds" which the railways have issued. It is supposed that these "stocks and bonds" have been used by the railways in paying the costs

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of acquiring the roads. This is the method pursued by the Interstate Commerce Commission in estimating the amount of capital employed by the railways in the United States at the present time. Formerly the Commission pursued another method, which will be stated later. We are also favored with the necessary data for this calculation by *Poor's Manual of Railways*, which is the highest authority in the world on all matters relating to American railways. I should add that while the *Manual* does not pursue this method for the ascertainment of railway capital, it gives the necessary figures by which it may be done. I have, therefore, added, for the sake of comparison, the figures of the *Manual* in addition to the government figures. This we will call—

CALCULATION NO. 3,

based on the amount of railway "stocks and bonds" issued as shown by the *U. S. Statistics of Railways* and *Poor's Manual*. Comparative for the periods to 1890, 1890-1900, 1900-1906.

Mileage covered (*U.S.S. of Rys.*)

1890, 156,402			
1900, 186,876; increase over	1890	30,474 miles	
1906, 214,472; " "	1900	27,596 "	

Stocks and bonds issued.

1890, \$8,984,234,616			
1900, 11,491,034,960; increase over	1890	\$2,506,800,344	
1906, 14,570,421,478; " "	1900	3,079,386,518	

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Stocks and bonds 1890.

\$8,984,234,616 ÷ 156,402 (miles) = \$57,443 per mile

Increase in stocks and bonds 1890-1900.

\$2,506,800,344 ÷ 30,474 (miles acquired) = \$82,260 per mile

Increase in stocks and bonds 1900-1906.

\$3,079,386,518 ÷ 27,596 (miles acquired) = \$111,588 per mile

Mileage covered (*Poor's Manual*)

1890, 163,359

1900, 192,161; increase over 1890 28,802 miles

1906, 218,433; " " 1900 26,272 "

Stocks and bonds 1890.

\$9,645,696,585 ÷ 163,359 (miles) = \$59,046 per mile

Increase in stocks and bonds 1890-1900.

\$1,917,242,419 ÷ 28,802 (miles acquired) = \$66,566 per mile

Increase in stocks and bonds 1900-1906.

\$3,394,577,760 ÷ 26,272 (miles acquired) = \$129,208 per mile

Increase stocks and bonds third

period over first (*U.S.S. Rys.*)... \$54,145 per mile

Increase stocks and bonds third

period over second..... \$29,328 per mile

Same, third period over first (*Poor's Manual*) \$70,152 per mile

" " " " second " " 62,642 " "

4.—In addition to obligations called stocks and bonds, the railways owe sundry other obligations, some of which are essentially bonds in character, though not secured by mortgages on the physical properties of the railways. These forms of debt usually hang in the balance, with the hope on the part of the railways, to put them in the form of permanent obligations on the arrival of favorable circumstances. Now, in 1888, when the Inter-

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state Commerce Commission began collecting railway data, it was quite positive that the kinds of obligations above referred to should be included in the capital account of the railways along with stocks and bonds, and they were so included in all their reports until 1896, when they were eliminated "at the request of the executive committee of the Association of American Railway Accounting Officers," (*Statistics*, 1896, p. 45) and have not since appeared in the government's *Summary of Railway Capital*. At the time these obligations were cut out of the government's railway book-keeping, they had mounted to the respectable aggregate of \$613,000,000. No doubt the elimination was especially welcome to the railways, for, in the last statistics published (1906, p. 61), they had reached \$1,100,977,164, which, the government accountant innocently adds, would have increased the railway capital \$5133 per mile.

It would appear that the managers of *Poor's Manual* were not quite so accommodating to the aforesaid Association as the Commission, for the *Manual* has always added to stocks and bonds the other obligations of the railways, which are essentially as much a part of railway capital as are stocks and bonds (See *Manual*, 1908, p. clxxviii.). This, then, is the fourth method of arriving at what Poor calls the "approximate cost of road and equipment." It is now my

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purpose to add to the government reports the items eliminated from them since 1896, and, for the sake of fullness and fairness, we will place along with the government's figures those from the *Manual*. This we will call—

CALCULATION NO. 4,

based on the total issues of stocks, bonds and miscellaneous obligations commonly taken to constitute railway capital and the approximate cost of our railways.

Comparative for the periods to 1890, 1890-1900, 1900-1906.

Mileage involved (*U.S.S. of Rys.*) same as calculation No. 3.

Stocks, bonds and miscellaneous obligations.

1890, \$9,437,343,420		
1900, 12,085,822,830; increase over 1890	\$2,648,479,410	
1906, 15,671,398,642; " " 1900	3,585,575,812	

Stocks, bonds and miscellaneous obligations 1890.

\$9,437,343,420 ÷ 156,402 (miles) = \$60,340 per mile

Increase in same 1890-1900.

\$2,648,479,410 ÷ 30,474 (miles acquired) = \$86,909 per mile

Increase in same 1900-1906.

\$3,585,575,812 ÷ 27,592 (miles acquired) = \$129,949 per mile

Mileage involved (*Poor's Manual*).

1890, 163,359		
1900, 192,161; increase over 1890	28,802	
1906, 218,433; " " 1900	26,272	

Stocks, bonds and misc. obligations.

1890, \$10,020,925,215		
1900, 11,891,902,339; increase over 1890	\$1,870,977,124	
1906, 15,593,548,951; " " 1900	3,701,646,618	

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Stocks, bonds & misc. obligations 1890.
 $\$10,020,925,215 \div 163,359$ (miles) = $\$61,343$ per mile

Increase in same 1890-1900.
 $\$1,870,977,124 \div 28,802$ (miles acquired) = $\$64,959$ per mile

Increase in same 1900-1906.
 $\$3,701,646,618 \div 26,272$ (miles acquired) = $\$140,897$ per mile

Increased stocks, bonds and miscellaneous obligations third period over first (<i>U.S. S. Rys.</i>).....		\$69,609	per mile
Same, third period over second	43,040	" "	
Same, according to Poor, third period over first	79,554	" "	
Same according to Poor, third period over second.....	75,938	" "	

5.—The last and, in my opinion, the least objectionable method of arriving at the conclusion which we are now seeking, is to divide the gross liabilities at different periods by the mileage. It may very well be said that gross liabilities are no just and fair criterion by which to judge the cost or value of a business, that there may be valuable assets offsetting these, and that they must be taken into account. But the answer to this argument is that I am not endeavoring to arrive at the actual cost of building railways, but am merely assuming, for the present, that railway facilities are, as they should be, practically the only asset of railways, excepting, of course, what may be called their working capital. What other assets, if any, they have will be considered later. At any rate, it is perfectly legitimate to compare the increase of facilities and gross

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liabilities at different periods, regardless of the inferences which may be drawn from the results. We have a right to know what the total railway debt is at any period, and how that debt compares with the facilities the railways are providing the public. Besides, it must not be forgotten that though assets may fail to realize, liabilities decrease only as a result of actual payments or bankruptcy. It is well, therefore, not to be too much deluded by alleged assets. This fifth method we will call—

CALCULATION NO. 5,

based on the gross liabilities of the railways as shown by their consolidated balance sheets as they appear in the *U. S. Statistics of Railways*.

Comparative for the periods to 1892, 1892-1900, 1900-1906.

Mileage covered the same as in calculation No. 1.

Gross liabilities.

1892,	\$10,955,466,145		
1900,	12,993,686,620;	increase over 1892	\$2,038,220,475
1906,	17,628,092,900;	“ “ 1900	4,634,406,280

Gross liabilities 1892.

$\$10,955,466,145 \div 143,516$ (miles) = \$76,336 per mile

Increased gross liabilities 1892-1900.

$\$2,038,220,475 \div 37,921$ (miles acquired) = \$53,749 per mile

Increased gross liabilities 1900-1906.

$\$4,634,406,280 \div 26,873$ (miles acquired) = \$172,455 per mile

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Increase of gross liabilities third period over first.....	\$96,119 per mile
Increase of gross liabilities third period over second.....	118,706 " "

Summary of results of calculations

For those who have not the care or patience to follow the foregoing calculations in detail, I will state the conclusions which may be drawn from them. It is with no little hesitation that I premise the statement of these conclusions by the remark, that from the best information which I have been able to obtain, the *actual cost* of the building and equipment of the railways in the United States has not exceeded an average of \$30,000 per mile. Concerning this matter, I cite the following quotation from the *U. S. Statistics of Railways*, 1900, p. 54.

The aggregate amount of railway securities reported by the carriers as outstanding on June 30, 1900, was \$11,491,034,960, being an increase as compared with the previous year of \$457,080,062. If this increase be added to the increase in railway securities during the years ending June 30, 1899 and 1898, it appears that the increase in railway securities during the three years previous to June 30, 1900, was \$856-026,886. Confining comment to the year covered by this report, it is pertinent to notice that the increase of \$457,080,062 in railway securities is synchronous with an increase in mileage of 4,051.12 miles. *It can hardly be claimed that the issue of securities for*

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the construction of this new mileage would exceed \$120,000,000, which would leave an increase of \$337,080,062 to be explained in some other manner. Whether facts of this sort be regarded in their bearing upon the adjustment of rates or as a question of equity in the conduct of a quasi-public business, they certainly present a problem in which the public has a legitimate interest.

This quotation (the italics are mine) is inserted for what it shows, to wit: That the Interstate Commerce Commission, which is responsible for the statistical report, believed in 1900 that the actual cost of the mileage acquired in that year did not exceed \$30,000 per mile, while the securities issued exceeded \$113,000 per mile.

Bearing in mind that we have nothing to do at present with the question of the actual cost of acquiring our railways, but only with the comparative alleged cost at different periods as this cost appears from the railway books, let us condense these calculations so that they may be at once taken in by the eye.

1. Based on "cost of road" account.

Period prior to 1892.....	\$56,290	per mile
" 1892-1900.....	42,098	" "
" 1900-1906.....	71,222	" "
2. Based on "cost of road and equipment" account.

Period prior to 1892.....	\$59,675	per mile
" 1892-1900.....	44,801	" "
" 1900-1906.....	80,265	" "

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3. Based on "stocks and bonds" issued.
 Period prior to 1890 (*U.S.S. of Rys.*)... \$57,443 per mile
 " 1890-1900..... 82,260 " "
 " 1900-1906..... 111,588 " "

Same according to *Poor's Manual*.

- | | | | |
|---------------------------|-------------------|---|---|
| Period prior to 1890..... | \$59,046 per mile | | |
| " 1890-1900..... | 66,566 | " | " |
| " 1900-1906..... | 129,208 | " | " |

4. Based on total issue stocks, bonds and
 miscellaneous obligations.
 Period prior to 1890 (*U.S.S. of Rys.*)... \$60,340 per mile
 " 1890-1900..... 86,909 " "
 " 1900-1906..... 129,949 " "

Same according to *Poor's Manual*.

- | | | | |
|---------------------------|-------------------|---|---|
| Period prior to 1890..... | \$61,343 per mile | | |
| " 1890-1900..... | 64,959 | " | " |
| " 1900-1906..... | 140,897 | " | " |

5. Based on total liabilities.
 Period prior to 1892..... \$76,336 per mile
 " 1892-1900..... 53,749 " "
 " 1900-1906..... 172,455 " "

The first thing that strikes one in a glance at these figures is that, no matter what method we employ for the measurement of the cost of our railways, the increased cost during the first six years of this century over all past records is something frightful. Let us employ only round figures.

If viewed from the simple standpoint of the alleged "cost of road," the increase over the preceding ten years was \$29,000 per mile, a sum nearly equal to the actual cost of railway construction.

If viewed from the standpoint of "cost of road

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and equipment," the increase was \$35,000 per mile.

If viewed from the standpoint of "stocks and bonds" issued, the increase, according to Poor, was \$63,000 per mile.

If viewed from the standpoint of "stocks, bonds and miscellaneous obligations," the increase was, according to Poor, \$76,000 per mile over the preceding period.

If measured by the total liabilities, the excess was \$130,000 per mile. In other words, the gross liabilities per mile of line acquired in the first six years of this century, were more than three times as great as the gross liabilities per mile of line in the eight years preceding 1900.

The second thing which strikes one in looking at these figures is, that if the period 1890-1900 be taken as a period of economical railway acquisition, then the period prior to 1890 was one of extravagance, and the period following 1900 was one of gross extravagance.

The third striking observation that may be made is this: That if we had acquired our 27,000 miles of road in the period 1900-1906, as economically as we acquired our 40,000 miles in the period 1890-1900, this country would have been burdened with \$1,700,000,000 less railway "stocks and bonds," for which it received nothing; with \$2,050,000,000 less railway "stocks, bonds and miscellaneous liabilities," for which it received

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nothing and with \$3,510,000,000 less gross railway liabilities, for which it received nothing.

Finally, it is fairly apparent that some mephistophelian influence has been at work during this century, loading our railway system and the country with billions of debts for which neither the system nor the country has anything to show. That this is so will be obvious from one more comparison which, at the expense of patience, I am compelled to make.

Since the only things which we know as railway facilities consist of railroad and equipment, as hereinbefore defined, we would naturally expect that in any thriving, economically and honestly conducted railway system, the cost of road and equipment would at different periods bear a fairly constant proportion to gross liabilities. Let us take our same periods and see how our railway system has been serving us, taking our data from the same balance sheets hereinbefore referred to.

1892, gross liabilities.....	\$10,955,466,145
" cost of road and equipment.....	8,564,394,830
Excess of liabilities.....	\$2,391,071,315
1900, gross liabilities.....	\$12,993,686,620
" cost of road and equipment.....	10,263,313,400
Excess of liabilities.....	\$2,730,373,220
1906, gross liabilities.....	\$17,628,092,900
" cost of road and equipment.....	12,420,287,938
Excess of liabilities.....	\$5,207,804,962

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Thus it will be seen that between the first period and the second, the proportion of excess of liabilities was fairly constant, the breach between the two having widened by only about \$340,000,000 under the influence of the acquisition of nearly 38,000 miles of road. Between the second and third periods no such proportion is found, the breach widening to more than \$2,677,000,000 under the influence of the acquisition of less than 27,000 miles of road.

It would seem scarcely necessary to warn the reader against the difference between *thinking* about the increasing cost of our railways, as railway people usually put it, and as it has been above presented. The railway people usually say, "Oh, yes, the railway debt is increasing a thousand or two thousand dollars a mile per year! But what does that amount to?" Well, I will show you what it amounts to, by a very simple comparison taken from the figures of *Poor's Manual*, 1908, p. clxxviii.

Miles of railway	Average per mile	Total debt
1906, 218,433	\$71,388	\$15,593,548,957
1905, 214,044	68,038	14,563,199,931
4,389	\$3,350	\$1,030,349,026

. Here you will see that an average increase of but \$3350 per mile amounted to the enormous sum of \$1,030,349,026, and if you divide that sum by 4389—the number of miles of road we

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acquired in 1905-6—you will see that *each mile of road acquired* cost the people of this country not \$71,388, but \$234,757! If you prefer to take the years 1906-7, you will see by the same authority that we acquired 5948 miles of new road at a cost of \$907,844,112, or at the rate of \$152,629 per mile.

And yet is not this the twentieth century, the very Rooseveltian era, with its proclamations ad libitum against the "predatory rich"; with its determination to put the bit into the mouth of hitherto uncontrolled wealth? And yet the greater part of the period prior to 1900 was supposed to have been specially characterized by all that was extravagant, reckless and criminal in railway making; when the fountain, whence flowed watered stocks, was in its primal flow; and manipulation and stock jobbery were a recognized business. For the most part, in those days nobody imagined that the stock of a railroad corporation was anything but the legitimate profit of the promoter, or that roads should be built otherwise than out of their bonds. For was not that the era of the reign of Jay Gould and Jim Fisk, of the old Commodore, of Daniel Drew and of Erie; the era of men and practices held up before our children as horrible examples? Yet with all their genius, the old buccaneers were unable to stuff railroad capitalization more than \$60,000 per mile. How they must groan in their graves thinking what

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babes they were in the gentle stuffing art, knowing that there are stuffers now in good health and with ever-increasing stuffing ability, who have stuffed railroad capitalization to \$234,757 per mile—over four times what the genius of the past could contrive.

Why railway mileage has increased in cost

It is not for a simple novice like myself to say why this great increase in the cost of railway mileage appears. The broad fact which strikes me is this: that the cost to the country of acquiring its railway facilities prior to 1900 was dirt cheap, if what we are paying for them to-day is the right price. But while I confess my incompetency to solve this riddle, still this is an age of inquiry—an age of quite impudent inquiry—when men are questioning their gods, saying if we are compelled to pay the keep of the ghost we are entitled to know something about him and his heaven-descended keepers.

Therefore, mighty geniuses of railway finance, it shall not avail you to shroud yourselves in mystery, nor may you push us to one side as utter ignoramuses, nor answer us in generalities; for we demand to know why this increased and ever-increasing cost to us of our transportation facilities—to us and to our descendants who must foot the bills.

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But I see you are irritated by my constant interjection into the argument of this phrase,—“cost to the country.” Well, it will continue to be interjected into every line of the argument, until you acknowledge and the people see, either one of two things: that your liabilities are utterly dishonorable and may never be paid, or else that the American people must pay them. Will you say that you have borrowed this money from the people intending to repudiate the payment of principal or interest, or being indifferent thereto? If so, then I charge you with being a lot of criminals obtaining money under false pretenses. But, of course, you will say that you intend to pay both principal and interest when due. Then I ask whence will you get the money to make the payments? And your only answer is that you will collect it from the people in the form of fares and freights, that you will levy it, to all intents and purposes, as a tax. Can any legerdemain of reason, then, pervert the conclusions, (1), that the people must pay it and (2), that every million of railway indebtedness upon which the railways must pay interest appreciably increases the tax you must levy; that when this indebtedness runs into billions it must very greatly increase the tax, and that every dollar of the indebtedness which is fictitious is a dollar robbed from the people?

Will you say that this increased indebtedness has arisen because of the increased cost of main-

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taining your roads and their equipment? If so, I remind you that the cost of maintaining road and equipment is supposed to be paid out of income, and *that you, who are the chief offenders*, have not only so paid it, but have been pushed to it to conceal your income in maintenance charges.

Will you say that the roads have been better, safer and more adequate? If safer, then why this showing? In 1900 all persons killed and injured 58,185; in 1906 all persons killed and injured 108,324. And if you speak of increased adequacy and efficiency, then I ask, when was transportation ever so paralyzed by inadequacy and inefficiency as in 1905-6-7? And besides, remember that you actually move freight at the rate of twenty-three miles in twenty-four hours! Yes, you have more than doubled the cost of mileage, but have you doubled the safety and adequacy of the system?

Finally, will you say that this increase from \$62,000 per mile to \$140,000 or \$172,000 (whichever way you figure it) represents the increased cost of railway construction in the first six years of this century over the first sixty years of railroad construction? If you do, I will be obliged to say you are romancing. With the single exception of the price of labor, there has been no item which entered into railway construction in the past six years, which was not relatively cheaper than for

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the period preceding 1900. For instance, you could have bought the best steel rails in the period since 1900, for an average of one-half the cost of poor rails in the whole railroad era before 1900, while the increase in the price of labor is more than offset by the efficiency of constructive appliances employed in recent years. Besides, such a conclusion is rendered impossible by your own figures. As above shown, your cost of road and equipment account is not within speaking distance of your liabilities.

Increase in railway debt not represented by increase in railway facilities

No, the simple truth is that this increase of over four thousand millions of dollars in the railroad debt in the six years referred to, is not represented by a proportionate increase in our transportation facilities. The vast majority of it never found its way into roadbeds, structures, rails or rolling stock. It was not used in railroad making.

"We concede it," say our friends the managers. "Nevertheless, while we cannot show the country actual new railroad for this increased debt, we (the railway companies) acquired other good assets with the money we borrowed."

"What do these good assets consist of?"

"Why, you see, we acquired stocks and bonds of the other members of the railway family. On

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the 31st day of December, 1907, we (the railroad companies) owned of the stocks and bonds of each other \$2,884,031,173 par value, and we now (December, 1908) own over three billions of them."

"Well," I ask, "I suppose you exchanged your own stocks and bonds for the roads you acquired, and cancelled their stocks and bonds?"

"Not by any means; we bought the stocks and bonds, not the roads."

"How did you buy them? Where did you get the money?"

"We issued our own stocks and bonds, mostly bonds, which we sold to the public, and with the proceeds we bought the other stocks and bonds. These are our assets and we receive the interest and dividends on them."

"And you pay interest and dividends on the bonds and stocks you sold?"

"Certainly."

"Where do you get the money to pay interest and dividends on the stocks and bonds you bought?"

"From the public in freights and fares."

"And where do you get the money to pay interest and dividends on the bonds and stocks you issued to buy these others?"

"From the public in the form of freights and fares."

"Let me understand this. If you issue three

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billions of your securities and buy three billions of the securities of each other, then the public has to furnish you with the money to pay interest and dividends on six billions of securities: is that correct?"

"Yes, certainly, but we get all the interest and dividends we can from the stocks and bonds we purchased."

"But has the public any more railway facilities than it had before you indulged in this transaction?"

"No, I cannot say it has any more railway facilities."

"But has it not three billions more debt to pay, and pay interest on, than it had before?"

"Probably, provided the principal and interest are ever paid."

You see, dear, gentle reader, that we are considering the economy of our transportation system from the standpoint of that patient donkey called the public, or shall we say that public goose whose feathers are to be plucked by any one who has the hands to do it. And this process of acquiring railway debts without acquiring railways for them has been going on for the last quarter of a century and more under the nose of all senatorial and representative wisdom in congress and legislature assembled, and never a voice raised in protest. It is exactly true that we owe upwards of three billions of railway debt to-day for which we have

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never received a foot of railway nor a car wheel, nor one benefit of any kind except the indirect benefit of harmony among the railways—the very thing which the people have all this time been howling themselves hoarse to prevent.

Great is poetic justice! The people enacted unjust and unnatural laws to prevent innocent combinations among the railways; now, as a penalty, they have to pay interest in the form of railway rates on more than three billion dollars of additional railway debt. And transactions of this character do not enter the domain of stock-watering at all. On the contrary, they are such as are looked upon with complacency if not with favor.

Of these three billions of securities owned by the railways, about 75% is represented by stocks and about 25% by bonds. The railways own about 30% of the voting stock in each other. This practically controls every railway act of every railway corporation in the country. I mention this now because it significantly points to the fact, that while we were allowing ourselves to be burdened with three billions of debts for which we got nothing, we established perpetual union among the railways and enabled the directors to so entrench themselves in authority, that nothing can remove them.

But surely, it may be said, there is something wrong with this reasoning. It is absurd to sup-

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pose that the railway debt has been increased three billion dollars, without increasing railway facilities accordingly. This must be a mere matter of book-keeping. And the railway people will, when it serves their purpose, tell you so. They will say that the new securities which they issued are simply represented by the old securities which they bought, and that the income which they derive from the purchased securities pays the interest on the new securities issued so that the public is really not called upon to pay any more than though the transaction had never taken place. And, they say: "If we wanted to do so we could sell the securities which we bought, and with the proceeds pay off the new debts we contracted."

All this is very plausible and sounds most reasonable. But I plant myself upon the high ground that, whereas before the transaction there were but three billions of securities outstanding, now there are six billions. Naturally I am suspicious of such a transaction. And upon further inquiry, I find that railway financing has a characteristic which distinguishes it from all other financing in the world: the railway never pays its debts, it merely refunds them. A railway debt once outstanding is a railway debt for all time to come. As to its stocks, of course this is true. And as to its bonds, if any one ever heard of a railway bond being paid, except another one was issued, he must

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be a very ancient individual. Moreover whenever a railway bonded debt is refunded, the process naturally raises two bonds where but one grew before. Therefore, while I readily concede that, as a matter of book-keeping, the railways have not by buying each other's securities, increased their apparent liabilities; yet, as a matter of railway financing, I am equally certain that every purchase of the securities of one company by another, increases the liabilities of the railway system for which the public must stand sponsor. This is so from the simple fact, that every railway stock and bond liability is practically an irredeemable liability. The railways could, *if they wanted to*, sell the securities they bought and retire the securities they issued, but the trouble is, that they never had the remotest idea of doing so. Their intention was and is to keep both of them afloat. If by any chance they should ever become surcharged with money derived from the sale of the securities they bought, that money will not be used to take up or pay off the new issue, but will find itself traveling by the shortest route into the pockets of stockholders by way of dividends, while the public will hold the traditional sack.

The question is, therefore, not what *might* be done, but what *will* be done. The railway corporations are every day buying and selling each other's securities, and the man has yet to be born who ever heard of one of them using the money

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derived from such a sale for the purpose of paying a bond or retiring a share of stock. Once issued, these become perpetual liabilities. However, lest I be considered guilty of injustice, I hasten to add that the above process has been modified by some companies to the extent that they have used the securities purchased as collateral security for the loans whereby the purchase money was raised, or they hold the purchased securities in their treasuries "against" the new securities they issue. How this will work out in the final windup remains to be seen, but, unless the history of American railway financing has come to a conclusion, we may safely predict what the end of such transactions will be. There will be a "General and Consolidated Refunding Mortgage" issued sufficient to cover both issues and in this form both will be afloat.

Need we ask whether this purchase of securities of one another is economical transportation in its financial aspect? From the standpoint of the public, it is not difficult to answer. We need railway facilities very much, indeed, and three billion dollars would have done much to get them for us, but it may at least be doubted, whether it is economy to pay interest on three billions of railway located in the skyland of high finance. As a transportation facility it is not very useful.

But is this financial operation justifiable from a railway standpoint? That depends on whether

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you are viewing it from the standpoint of a number of railway systems, which the people and the government have been trying to sick on to each other like a pack of fighting dogs or from the standpoint of each individual railway system, or from the standpoint of transportation as a science. If from the standpoint of warring railway systems—why, harmony was necessary at whatever cost to the public. If from the standpoint of each individual system—what matters it to that system how much its debts are increased, so long as it gets securities of equal value and makes connections which bring it paying business, or so long as the people can be induced to pay rates returning an income on the increased capitalization. Besides, there is the Stock Exchange ever to be thought of. And to bring a weak road under the control of a strong road is to boom the stocks of the former; with a plentiful supply of which, the manager has provided himself in anticipation of the announced change of control.

If viewed from the standpoint of transportation as a science—but there is no such science. The growth of such a science has been suppressed by the government, ignored, ridiculed and trampled upon by railroad managers; whose only idea of such a science has been and is that it teaches them how to grab everything in sight and make off with it as fast as they can. To them the science

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of transportation is the science of getting business for their railways, and making their securities attractive (or unattractive) on the Stock Exchange.

Securities made by resolution and printer's ink

Thus we can account for about a billion and a half of the increased indebtedness of our railways since 1900, by this practice of buying up securities of other companies in order to get their control, or a sufficient interest in them to bring about amicable relations. This, as above said, brought no foot of railroad to the public. How are we to account for the balance of this increase of railway debt over and above the amount actually spent in construction work? Largely this is to be accounted for by the ancient custom of just "issuing" it—of making railway securities by resolution and printer's ink.

I had promised myself that I would treat of the railways of this country as a transportation system, and not single out particular companies as illustrative of either good or bad practices. There are but few of them about which much good might not be said, and, I regret to say, but few of them that have not indulged in practices bearing ill results to the public. If it be a principle of transportation that railway capital should never be increased, except there be brought to the country a corresponding value in the form of increased transportation facilities; then, which

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one of our corporations has not been guilty? Therefore, when I find that I am compelled to break my promise, and use individual railway corporations as illustrations of practices which seem to me unfair to the public, I do so with this apology: that if the records of the best corporations were examined they would also most likely be found to be like offenders.

As a recent example of how railway corporations increase their debts (otherwise euphoniously called their capital) by the simple process of resolution and printer's ink, the following facts may be cited.

The Southern Pacific Railroad Co. is a corporation which on June 30, 1905, owned 3283 miles of railroad mostly in the State of California. On that date it had outstanding stocks and bonds as follows:

Stock outstanding June 30, 1905.....	\$128,307,960
Bonds " " " "	<u>124,165,500</u>
Total.....	\$252,473,460
Average debt per mile \$76,880.	

On June 30, 1906, this same company owned 3291 miles of railroad, and on that date it had outstanding stocks and bonds as follows:

Stock outstanding June 30, 1906.....	\$160,000,000
Bonds " " " "	<u>124,153,500</u>
Total.....	\$284,153,500
Average debt per mile \$86,342.	

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It will be seen from this, that in one year the mileage of the Southern Pacific Railroad Co. increased eight miles, while the debt increased \$31,680,040. Now what was the cause of this great increase of indebtedness and small increase of mileage in one year? It will naturally be supposed that the Southern Pacific Railroad Co. was contemplating some great extension of its railway facilities, requiring an enormous increase of capital. But this would be a mistake; for we find that the next year it had increased its mileage exactly eleven miles. Not a dollar of this increased debt was represented by a dollar that went into the treasury of the Southern Pacific Railroad Co. It was just a plain "stock dividend," amounting to \$31,692,040, for which nobody paid one dollar,—just common "water."¹ And to whom did the Southern Pacific Railroad Co. give \$31,692,040 of its capital stock? It distributed it among its stockholders gratis. And who were the stockholders? The Southern Pacific *Company* owned every share of the stock of the Southern Pacific Railroad Co. (*Poor's Manual*, 1907, p. 839).

So by this simple trick of resolution and printer's ink, the Southern Pacific Railroad Co. increased its indebtedness \$31,692,040, and the Southern

¹ The apparent discrepancy of \$12,000, between the amounts of increased debt and stock dividend, is explained by the fact that \$12,000 of bonds went into the sinking fund of the Company in 1906.

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Pacific *Company* increased its assets by a corresponding amount. In the succeeding year the former company paid to the latter company dividends at the rate of 4%, and this year at the rate of 6% per annum, on this absolutely fictitious issue of stock. If the Southern Pacific Railroad Co. did not raise the money to pay these dividends on that fictitious issue of stock, by a tax levied on the American people, then it got it from some other unwarranted source. Will any one pretend that if this fictitious issue had not been made, the rates charged *need* have been so high? It took nearly \$2,000,000 more to pay the dividends this year than would have been required had the spurious stock not been issued, and that money had to come out of the pockets of somebody.

What will you say of this transaction—that it was just one more stick piled on the back of the patient public donkey, and that all he did was just to give out one more grunt at the ever increasing load? Was this a legitimate transaction? “Yes,” say our railroad friends. “The railway was but capitalizing its increased earning power.” Then if it was legitimate, why may not this same railroad increase its capital debt this year by another \$31,000,000, and if this year, why not next year and so on? Is not the country growing, and must not its ever increasing growth give ever increased earning power to our railroads? And therefore why may not our railroads continue

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to capitalize the growth of the country and take the profits of that growth to themselves?

This is one of the processes by which the railway debt of the country has increased, without a corresponding increase of transportation facilities. Is this economy from the standpoint of the country?

Financing dummy companies

Another well known contrivance whereby the capitalization of our railway system has been overloaded is this. A company which is strong financially organizes a dummy corporation to build a new road. The dummy corporation authorizes a bond issue sufficient to build the road and a stock issue of about the same amount. The strong company then issues its own securities to an amount necessary to build the new road, and with the proceeds takes over the bonds of the dummy company and receives the stock as a bonus. In this way three issues of securities appear, usually each for about the same amount, but only one of them actually brings railway facilities into being, that is, the bonds of the dummy company. But the public pays interest on all three.

"But," you say, "this was all in the bad, bad, past—railroad corporations do not do such things to-day"—and many innocent souls are of your way of thinking. Yet, as I write, the ink is not

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dry on a transaction of this kind, involving an issue of fictitious securities amounting to over \$100,000,000. If you will be patient, I will tell you the story, and, besides, it includes a bit of real American history.

Once upon a time, that portion of North America, bounded on the north by the Columbia River, on the west by the Pacific Ocean, on the south by the Mexican boundary, and on the east by an irregular line extending from the state of Texas northerly through Salt Lake City to the Columbia River, was ruled over by a great and good monarch, called King Collis. A mighty railway king was Collis, and, while he lived, no other railway king dared enter his kingdom, save by consent of Collis. It is recorded history that Collis was on friendly terms with his neighbors to the east, among whom was King George. The way by which King Collis maintained good relations with his fellow monarchs to the east, was by allowing them to use his railways to transport their people, cattle and other chattels from the boundaries of their respective kingdoms to the Pacific Ocean, on the basis of a fair division of the spoils. But none too soon, good King Collis was laid to rest.

Then succeeded the reign of King Edward. He was a greater king than Collis, and sought to add to the kingdom which Collis left him all the rest of the territory west of the Missouri and Mississippi rivers. Historical gossip runs to the effect

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that Edward refused to give to King George as fair a division of the transportation swag as he had received during the reign of King Collis. It is also said that at about this time, King George was taken with an affliction of the head, which caused him to want to own a railroad from the Atlantic to the Pacific Ocean. I shall not try to solve these nice historical points, it being sufficient to say that, from some cause, King George concluded to invade the kingdom of King Edward. It is with the cost of this invasion that we are especially concerned.

As is well known, the Denver & Rio Grande is a railway, which, with its affiliated lines, extends from St. Louis to Salt Lake City. But it had no outlet to the Pacific coast from Salt Lake, except over the rails owned by the Southern Pacific roads. Naturally, it wanted one of its own, so, in 1903, it concluded to build a road from Salt Lake to San Francisco. To do this, it organized a dummy corporation, called the Western Pacific Railway Co.; and great mystery surrounded its beginnings. The length of the new line was to be 920 miles.

In true American railway style, this dummy fixed its capital stock at \$50,000,000, or about \$54,300 per mile. Then it proceeded to bond its road (to be) for \$50,000,000, or about \$54,300 per mile. Next, the Denver & Rio Grande and its connections, entered into a contract with its

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dummy, whereby the latter transferred, first and last, to the treasury of the former \$50,000,000 of its capital stock and \$50,000,000 of its bonds; and it was provided in the agreement that if the proceeds of the \$50,000,000 of bonds should not be sufficient to build and equip the road, the mother company should buy from her offspring sufficient second mortgage bonds to complete the road and provide it with terminals.

There was here *not even a pretense* that the road was to be paid for otherwise than out of its bond issue, nor that the \$50,000,000 of stock was anything but pure water. And, on page 542 of *Poor's Manual of Railroads* for 1908, you may see, set down under the heading of "Securities owned by the company" (Denver & Rio Grande) "\$50,000,000 Western Pacific Ry. Co. common stock."

But that is not all. Since the original issues were made, additional issues of \$25,000,000 of stock and \$20,000,000 second mortgage bonds have been put out, making a total of \$145,000,000. Nor is that all. To provide the money to buy the \$20,000,000 of second mortgage bonds, the Denver & Rio Grande issued and sold \$20,000,000 of its own bonds, so that, in order to bring this road into being, \$165,000,000 of stock and bonds have been issued.

Let us next inquire how much money was actually received by the Western Pacific Ry.

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from all these issues and how much was employed in the construction and equipment of the road. The first \$50,000,000 bond issue bears interest at 5% and it was sold at a discount of, at least, 10%. That takes off \$5,000,000. Next, it was provided that interest for five years should be withheld by the purchasers of the bonds. That takes off \$12,500,000 more. In short, the dummy company received for its \$50,000,000 of bonds, not more than \$32,500,000. Finally, for its \$20,000,000 of second mortgage bonds it received \$13,125,000, so that the cash received by the dummy for its \$145,000,000 of stocks and bonds did not exceed \$45,625,000 and was probably less. Thus it appears that the road cost to build and equip \$49,592 a mile, it is capitalized at \$159,586 a mile, while the total stock and bond issues which brought it into being mount to nearly \$180,000 a mile.

It is extremely problematical whether there was ever any justification for the building of the Western Pacific. It reaches no important points not already amply supplied with railways, or which might not have been supplied at a minimum of cost. But conceding that it was necessary for the people of this country to have this road, then, if it could be built for \$45,000,000, is it anything less than economic insanity for the American people, in order to get the road, to allow themselves to be loaded down with a debt

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of \$165,000,000 "to repudiate which is a national dishonour"?

NOTE.—I am well aware that the computations set forth in this section, are subject to the criticism that they fail to take into account the amount of increased capital which may have been devoted to the improvement of mileage already in existence. This may have been considerable but, so far as I am aware, no figures are available showing what it may have amounted to in any year or for any period. However, I do not think it will be seriously contended that the amount so expended will militate against the general conclusion that railway debts have increased out of all proportion to the increase of facilities.

ECONOMIC WASTE FROM DISHONESTY OF SECURITIES

It is not my intention to prolong this list of wasteful railway methods of financing, but to proceed to the consideration of one kind of loss to the country which has been, is and will continue to be, so enormous that all the others described become of relative unimportance. I mean the losses which the country sustains by reason of the dishonesty, lack of character, and instability of American railway securities. I care not what else may be said, this is true, that American railway securities should be the most substantial securities offered to any market in this world. As it is they have been smashed by every panic, whipped about by every rumor and serve every day as the subject matter of the manipulation of tricksters. The simple truth is that, from the

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beginning, American railway securities have been, now are and will continue to be not an investment, but the chief means by which the American people are forced to gamble and permit themselves to be robbed. And this is true, not because the overwhelming majority of the American people want to gamble, but because the game is forced upon them. They buy what they believe to be good, only to find that it is rotten.

There are two or three things that I hasten to say lest I be accused of utter unfairness. Those who devote their special attention to railway securities will ask: "Are they the only securities that are dishonest, that lack character and stability?" And I answer: "By no means; there are billions of industrial securities just as dishonest, just as lacking in character, just as instable as railway securities." Others will ask: "Are railway securities the only securities that are smashed in panics, that are whipped about by rumors and manipulated by rascals?" And I answer: "By no means; there are billions of others so smashed, so whipped and so manipulated." "Then," you ask, "why pick our railway securities to say hard things about?" And, I answer: "First, because any number of wrongs do not make right, and second, because I am specially dealing with the economy of the transportation industry."

And finally, a word about poor old Wall Street

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and the Stock Exchange. Has not the vocabulary of invective been exhausted in saying things about them? I can find nothing meaner to say about them than has been said thousands of times, and for the most part by people who have but a slight realization of the significance of their words. But to these facts I call your prayerful attention. The New York Stock Exchange never has been, is not now, and never will be, either better or worse than the *securities* which are therein bought and sold. It is not the institution which issues securities. It is the great market where securities are bought and sold. It has no legislative power. The legislative power in this country is vested in congress and a half hundred (more or less) legislatures. It ill becomes these legislative bodies and the people who call them into being, to shift the responsibility for the existence of fraudulent, dishonest, characterless and unstable stock issues, upon the Stock Exchange. Again I say, the Exchange is but the market wherein the stocks which the people and the legislatures allow to be issued, are dealt in. And mark this also: the Exchange does not permit one-half the rotten stuff which the people and the legislatures allow to be issued, to be traded on its floor. The lawmakers could prohibit the issuance of these stocks. The Exchange cannot prohibit. It can only try to sift the apparently best, from the billions of trash the lawmakers permit to be

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manufactured, and to prohibit the apparently worthless from being bought and sold within its portals.

And, now, confining ourselves to railway securities, let us proceed to a rapid review of the losses and waste which have resulted from the *character* of railway securities and their incident instability.

Inherent dishonesty in the multiplied diversity of railway securities

One of the chief causes of the dishonesty, lack of character and instability of American railway securities, is found in their very multiplicity, in the lack of uniformity, in the great variety of these securities as a whole, and the great variety of securities which have been issued by each railway corporation.

All railway securities may be put into one of three groups: (1), stocks, (2), bonds, (3), other obligations.

Of stocks there are several kinds:—common stock; 1st preferred stock, cumulative or non-cumulative; 2nd preferred stock, cumulative or non-cumulative; and guaranteed stock.

Of bonds there are so many kinds that I will not try to name them all:—First mortgage bonds, second mortgage bonds, third mortgage bonds and even fourth and fifth mortgage bonds; general mortgage bonds, consolidated mortgage bonds

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and general consolidated mortgage bonds; prior lien bonds and general lien bonds; convertible bonds and convertible debenture bonds; refunding bonds, sinking fund bonds, extension bonds, extended bonds, construction bonds, improvement bonds, terminal bonds; consolidated annuity bonds, irredeemable bonds, collateral trust bonds, serial bonds, equipment bonds and debentures; first, second and third income bonds; and so many other kinds that I have forgotten their very names.

Among "other kinds of obligations" may be mentioned, in addition to current liabilities, short term loans, scrip, warrants, and the like.

It is far from my intention to weary the reader with an attempted definition of these different kinds of railway securities. It is sufficient for my present purpose to say that, for the most part, they are essentially American—the result of the inventive genius of the American railway financiers and their lawyers, whose capacity to supply various names for the same thing seems inexhaustible. But disguise them under whatever names we may, the one patent fact which stares at us is this: across the face of every one of these securities is written the words "railway debt." And this debt possesses one of two characteristics: it is either honest and therefore to be paid in dividends, interest and principal, or else it is dishonest and therefore liable to default and dis-

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honor. These debts possessed one or the other of these characteristics when they were created, when they were floated and in their current circulation now, they are stamped either honest or dishonest.

This polyglot of railway securities is the immaterial representation of our material railway system. It is this jumble of securities which passes current among our people as the value of our railway system. It is the thing in which some seventeen thousand millions of the savings of the people are invested.

Wide variation in value of different securities of same company

The first thing which must occur to any one contemplating this multifarious mess is this: to what desperate straits our railway financiers must have been put, when they were forced to borrow money by every conceivable scheme which ingenuity could invent. Why should not every honest dollar invested in our railways, have stood upon an equal footing with every other honest dollar? Why should we have had three or four classes of stock, some with preferential rights over others, if each class was represented by equally honest dollars put into our railroads? Why should our roads be plastered, two, three and four deep, with mortgages, some of which issued by the same company and upon the same security,

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have but half the value of others? Do these facts point to incompetency on the part of our railway financiers, or to indifference, or to downright dishonesty? For, will any one say that our railways have not been and are not now, good security for every honest dollar that they cost? And are they not supported by a carrying trade greater than that of any other system in the world? Why then this enormous difference in value between the different securities of the same roads?

Take the Rock Island System. Here is a company owning nearly 8000 miles and controlling over 6000 miles more, of *actual railroad*. Not to mention other important points, it has terminals at St. Paul, Chicago, St. Louis, Kansas City, Denver, Galveston, New Orleans and Birmingham. It rests like a gigantic many fingered hand upon, and is nourished by, the most prolific country beneath the sun—the great Mississippi Valley. On the first day of July, 1908, the capitalization of this company was as follows:

Common Stock (Rock Island Co.)	\$96,000,000
Preferred “ “ “	54,000,000
4 % bonds (Railroad Co.)	70,067,700
5 % “ “ “	17,364,180
Total capital debt	<u>\$237,431,880</u>

Now compare this capital debt with the valuation of its securities on the New York Stock Exchange on the same day:

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	MARKET PRICE	VALUATION	CAPITALIZA- TION
Common Stock	15½	\$14,448,000	\$96,000,000
Preferred "	27	14,580,000	54,000,000
4% bonds	62½	43,892,312	70,067,700
5% "	60	10,418,508	17,364,180
Total		\$83,338,820	\$237,431,880
			83,338,820
Excess capitalization over valuation			\$154,093,060

I have chosen the Rock Island Co. for the purpose of this comparison not, as many might suppose, to show its excessive capitalization, but for the purpose of illustrating the *marked range of values between its different classes of securities*. And I have chosen it also, because the Rock Island Railroad, considered as a railroad and not as a financial operation, is one of the best and most favorably situated in the United States. Why should one class of this company's "debts" be selling at 15½ cents on the dollar, another class at 27 cents, another at 62½ cents, and still another, bearing a higher rate of interest, at 60 cents? Will you say that this is because the territory of the Rock Island is not good? Or will you say that considered as a railroad it is not good? No: you will have to lay it to just one fact, the financing method, the utterly uneconomic and wasteful, not to say dishonest method, which has characterized our transportation system. All the dollars which were put into the Rock Island System were not equally honest dollars. Some of them were

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utterly forged and counterfeit, others were debased and one has to go back a long way in the history of this company to find the actual honest gold dollars that built the road.¹

The point to which I am now directing attention, as illustrative of the lack of character of our railway securities, is the variation in the value of the different classes of securities issued by the same company, not to the variation in the value of the same security at different periods. What was above said concerning the variation in value of the different securities of the Rock Island, may be said to have characterized practically all the different railways at some time in their respective histories.

Even where at the present time, there appears a considerable uniformity in the value of the different securities of the same road, you only have to go back a sufficient distance to find the multi-formity complained of. Take for example the Union Pacific Railroad Co., whose securities lead the market to-day. Only ten years ago its common stock was selling at 16 cents on the dollar, its preferred at 45 cents, and its 4% bonds at 88 cents. Even the sturdy old Pennsylvania Railroad, which since 1860 has never missed paying a dividend each year, does not escape the criti-

¹ In this comparison I have assumed that the stock of the Rock Island Co. represented the stock of the Railroad Co., though the bonds above mentioned were the bonds of the latter.

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cism, for no longer ago than last June, its common stock was valued at 120 while its 4% bonds were selling at 103 and its 4% "gold loan" at 92.

If such may be said of the strongest railway in this country, what may be said of our less strong and really weak roads? Why, this, that their different securities vary in value from such as are merely nominal to such as reach par value. Take this list which comes to me as I write—December 12, 1908, in the boom days.

Name of road	Common	1st Pref.	2nd Pref.	Bonds
Ches. & Ohio	58			5's-115, 4½'s-106
Chi. & Alton	53			3's-78, 3½'s-76
Chi. & Gt. W.	12	36	14	
Colo. So.	55	72	68	4's-97, 4½'s-96
Denver & Rio G.	38	82		4's-98, 4½'s-103, 5's-100
Erie	35	49	40	P.L. 4's-89, Gen'l 4's-75
K. C. F. S. & M.		74		4's-83
Kans. City So.	38	67		3's-73
Long Island	51			4's-97
M. & S. L.	87			5's-107, 4's-84
Mo. K. & S.	38	71		4's-98, 2nd 4's-88, ref. 4's-84
Mo. Pac.	65			5's-103, 4's-79
N. Y. C. & S. L.	54	83		4's-101
N. Y. O. & W.	46			4's-99
Norf. & West.	84	86		4's-99
Peoria & E. I.	28			4's-57
Rock Island	23	60		4's-75, 5's-85
S. L. & S. F.		63	40	4's-85, 5's-110
St. L. & S. W.	23	54		1st 4's-92, 2nd 4's-80, Con. 4's-76
So. Ry	25	59		Con. 5's-108, Gen'l 4's- 75, Div. 4's-88

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Name of Road	Common	1st Pref.	2nd Pref.	Bonds
Texas & Pac.	33			1st 5's-114, 2nd 5's-65
Wabash	18	46		5's-111, 2nd 5's-100, deb. 6's-83, ref. 4's-70
Western Md.	15			1st 4's-79, Gen'l 4's-56
Wisc. Cent.	30	68		1st 4's-83, 50 yr. 4's-89

After scanning this list showing the enormous variation in values of the different classes of securities of the same road, will any man possessed of common honesty, have the hardihood to say that in their original issues, these different securities were each backed by the same number of honest dollars, dollar for dollar of face value? Of course, no such man will be found and especially no railroad man.

Primary cause of dishonesty of railway securities

If, therefore, you are seeking the primary cause of the dishonesty of American railway securities, you will find it exactly in the multifarious character of these securities. If the law had provided that but one uniform kind of security could ever have been issued, and that that security should be represented in the treasury of the corporation by honest dollars paid to it, ninety per cent. of the evils of our railway system and of stock gambling would never have been born. Therefore, honest people, cease lashing Wall Street and the Stock Exchange, and rather lash your own backs, for you,

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the sovereign lawmakers of this country, have permitted these evils to exist and grow.

But, you will say, we would never have had our railway systems, if we had not permitted this sort of financiering; that is, if we had not permitted the corporations to issue different classes and grades of securities. You say, it was necessary to do this, in order to induce capital to invest in the construction of railways: the hope of large profits had to be held out to induce investments, and this hope was realized most largely by allowing the promoters to take to themselves the securities which cost them little or nothing. Say this is so: what then? Will you say that during the past fifty years in this country, *a railroad has been honestly built where it was needed*, which did not possess within itself the inherent capacity to *earn* a fair return upon its honest cost?

And there you may see the other side of the railroad shield. During these fifty years you, the people, have stood in constant antagonism to your railways. You have been forever hammering, hammering, hammering them, to bring about rate reductions. Blind to the load of dishonest stock and bond debt which was being heaped upon you, fearful to touch that matter lest you discourage railway building, on the contrary encouraging and crying for more competitive roads by whatever means brought into being, you thought to relieve yourselves of all rail-

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way wrongs by the process of curtailing railway earnings.

You were oblivious to the fact that honest money invested in railways, was entitled to a guaranty from the people that it would be *allowed to earn* an honest return commensurate with other enterprises. This guaranty you refused from the beginning to give, with the result that those who have been most instrumental in bringing our railway systems into being, have sought their profits in dishonest issues of securities. The railway as a profit earning industry, has been subordinated to the railway as a speculative and gambling financial operation. The promoter early found that he could make ten dollars *out of you* by gambling in railway securities, easier than he could make one dollar out of railway earnings.

Had you, the people, from the commencement of the railroad era, provided by uniform laws, that railway capitalization should not exceed the cost of railway facilities; that invested capital should be represented by but one uniform kind of stock; that no unneeded road should be built and that railroads should be allowed to earn incomes on invested capital commensurate with that in other industries; you would not now be cursed with this multifarious and malodorous mess of railway securities, and never a railroad in this country would have known the bankruptcy court. Wherever a railway has failed in the United States,

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you may rest assured it has come from one of three causes:—

- 1.—It was not needed, or
- 2.—It was not honestly made or capitalized or
- 3.—It was not allowed to earn enough to support it.

From the violation of these three fundamental principles, which show their obverse sides in reckless competitive building and operation, in dishonest multifarious securities and in refusal to allow earnings sufficient for support, came the dreadful losses which the people have sustained by reason of the instability of railway securities.

THE INSTABILITY OF RAILWAY SECURITIES

In 1907 a book entitled *American Railways as Investments*, by Carl Snyder, appeared. It is by all odds the most valuable work of the kind that has ever been published, and I would it were in the hands of all who are interested in this subject. By permission I make the following quotation from his work, adding in italics a sixth column of low prices since his book was published.

These securities, and especially the railway stocks, it is well known, are subject to very wide fluctuations in value. This may amount in the aggregate to a perfectly enormous sum. Thus from the highest point in 1902 to the low point of 1903-4, the average

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fall in railway shares was 30%. The rise from the low point of 1903-4 to the high point of 1905-6 was over 50%.

Nor were these enormous fluctuations confined to the weaker class of stocks. Below is a list of a dozen standard railway stocks showing their extreme range in price through seven years:

	Low 1900	High 1902	Low 1903-4	High 1905-6	Low Mch. '07	Low <i>Since</i>
N. Y. & New Hav..	207	255	185	216	173	127
N. Y. Cent.....	125	168	112	167	112	89
Pennsylvania.....	124	170	110	148	114	103
Reading.....	15	78	37	164	91	70
Lackawanna.....	171	297	230	560	445	
C. & N. W.....	150	271	153	249	*138	126
St. Paul.....	108	198	133	199	*123	93
Ills. Cent.....	110	173	125	184	134	116
Louis. & Nash.....	68	159	95	157	108	85
Atchison.....	18	96	54	110	83	66
Union Pac.....	44	33	65	195	120	100
Gr. Northern.....	<u>144</u>	<u>207</u>	<u>160</u>	<u>348</u>	<u>*126</u>	<u>107</u>
Average	107	191	121	224	147	

* Ex. valuable "rights."

It will be seen that this dozen standard securities rose in two years from an average value of \$107 per share to \$191 per share, then declined within a year to an average of \$121 per share, then rose again in eighteen months to almost double this figure, and fell in 1907 to an average of \$147 per share.

The peculiar fact about this enormous change in values was that it had little to do with the actual earnings or the conditions of the railways themselves.

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Throughout this entire period there was practically no decrease in railway earnings, nor in railway profits; on the contrary, each year of this period proved either equal to the preceding year, or showed a handsome increase.

Now the remarkable and all-important inference from these facts is: that while transportation as a physical operation, remained constant as the north star, transportation as a financial operation, was oscillating like the waves of the ocean. The physical thing itself was stable; that which represented the physical thing was utterly unstable. Apparently there was no definite relation between the thing—the railway, and the representative of the thing in the financial world—the securities of the railway.

This lack of definite relationship bears its due share of responsibility for two great wrongs, the constant drainage of wealth from the masses, and the constant and ever increasing accumulation of wealth in the hands of the few; in short, the unequal distribution of wealth in the United States.

Nor need we attribute these enormous fluctuations to the manipulation of securities. It is not necessary to manipulate them. From their very character, they manipulate themselves. But whether securities are manipulated by tricksters, or whether these great and minor oscillations are due to the inherent instability of the securities themselves, upon the whole and in the end the

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fact is, that the current of accumulation sets constantly toward the rich. They, from their greater financial ability; their command of the necessary money, and, above all, from their possession of facts not available to the great multitude of dealers in railway securities, are able to take advantage of the market fluctuations. I do not doubt that there is much justification for the often heard remark, that the "insiders" regularly feed securities to the public when they are high and buy them back again when they are depressed below their actual values.

The twelve corporations referred to by Mr. Snyder, had an aggregate stock capitalization of about \$1,900,000,000, divided into about 19,000,000 shares of the par value of \$100 per share. If you put the fluctuations which took place in these shares during this period alone, into figures you will find them to be as follows:

Rise in two years.....	\$1,596,000,000
Fall in one year.....	1,330,000,000
Rise in 18 months.....	1,957,000,000
Fall in one year.....	1,463,000,000

If, now, you take into consideration the well known psychological fact, that customarily the foolish and ill-advised multitude buy and the clever, shrewd, and knowing few sell, when stocks are at their height, and that the reverse of this operation takes place when stocks are low; you will have little reason to wonder why we are

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approaching the era of billionaire plutocracy. It is not that they are makers of wealth, but that they are simply receivers of wealth. The current of savings flows with a mighty but steady stream, from the hands of the multitude to the vaults of the few.

Yes, if I belonged to the latter class, I would pray that history might continue to repeat itself. As it is, I am fighting my little fight in the hope that the American people may some day see that the only chance for their savings lies in the establishment of *stability* in their investments. If, for instance, railways were permitted to earn a certain fixed percentage on their capital, and this certain fixed percentage should be regularly distributed among the holders of their securities, I fail to see how all the forces that play upon markets could *greatly* influence the value of such securities. But of this, more hereafter.

At present, I call your attention to this fact. In the twelve months ending June 30, 1907, the total railway transportation system of the United States cost the people in round numbers two billions six hundred millions of dollars. That was the amount the railways received in freights and fares. But in a like period of twelve months, railway securities declined in selling value an average of more than thirty per cent, estimated at about five billions of dollars. Thus you will see that the decline in the value of railway securi-

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ties was nearly twice as much as the total cost of carrying on the entire system for a like period. Yet during this period the railway as a material, physical fact, did not change in the least, except to extend itself about five thousand miles.

Far be it from me to intimate that this decline of five billions represented an actual loss of that amount. But minimizing it as we may, the important fact remains, that the loss was enormous. At this writing the loss has been largely made up, only to begin the process of repeating itself. But who will even know the tens of thousands of people who were compelled to sacrifice their securities during that period of depression and panic? Who will ever be able to tell the mighty ramifications of those losses, of financial institutions which failed, or had their margins of safety cut to the quick, of merchants who suffered insolvency because their bankers were unable to aid, of industrial enterprises which suspended, of hundreds of thousands of laborers thrown out of employment, of the careful provision of old age lost or imperiled and of railways themselves forced into bankruptcy or barely keeping out of it?

Of course, it would be at once childish and unjust to charge our late panic entirely to the dishonest and unstable character of railway securities. Yet, if, as I believe, all panics are caused by laying upon industries greater credit

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burdens than they can carry, then the railways must bear their just share of the blame, for no other industry has been so great an offender.

Now, if you will cast your retrospective eye over the past fifty years of our railroad history, you will see that in addition to innumerable minor oscillations, there have been twelve, so to speak, earthquakes and three violent eruptions in railway securities. In each of these the values of the railway securities have been shaken, and in the greater ones the very foundations have almost gone from under them. I speak not of the effects of these upon professional stock gamblers, in whom interest is lacking; but of their effects upon millions of honest people who had invested their savings in railway securities, thinking them good and honest only to find themselves time after time, victims of the same delusion. Verily, for the last fifty years, railway securities have been a mighty sponge perennially soaking up the savings of the people, and when they were squeezed out, vast amounts of these savings were washed away unto the limitless ocean of industrial waste, or into the bulging reservoirs of the rich.

The only answer to all this is the shrug one often sees, accompanied by the remark: "The fools should have had more sense than to have invested in railway securities." Probably: yet the far reaching effect of this attitude is overlooked. It not only implies the utter dishonesty

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of the financial methods of railway corporations; it puts the stamp of shame upon the American people as deliberate tolerators of dishonest corporate management; it implies the singular lack of care which our government has for its citizens, in permitting the greatest available investment to be of such character and it offers but scant encouragement to the public to come forward with further loans to carry out improvements and extensions now urgently demanded.

Thus, I trust, it has become fairly clear that the question: "Is our railway system economic?" assumes a much wider scope than the question, "Are railway rates reasonable?" The problem as it presents itself to me, is nearly coextensive with transportation in all its relations and aspects. It is essentially a problem of national economy, or, putting it otherwise, of national economic waste. It involves, on the one hand the freedom of those who travel from exposure to unnecessary hazards, and on the other hand the loss of national efficiency from the unnecessary maiming of over one hundred thousand persons a year. It involves the provision of the necessary transportation facilities to expeditiously take care of the traffic of this country at all times. It involves, likewise, the honesty of the capitalization of corporations engaged in transportation, the stability of investments and, in a large measure, the very honor of the nation itself.

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IS OUR RAILWAY SYSTEM AN IMPARTIAL SERVANT OF ALL PERSONS AND ALL PLACES?

This I take to be an axiom of transportation: that it sells its service to all who require it with blind impartiality. Out of the violation of this self-evident principle of railway justice, three great abuses have grown. But he who is a complainer only of railway wrong, will do well to dilute his complaint with a fair statement of the conditions under which the railway came into existence and has grown. I find little that may be offered in extenuation of the financial methods of railway managers, but there is scarcely any other wrong with which the railway has been charged, for which some excuse may not be found in the conditions which attended its development.

So accustomed are we to think of the railway as a fixed and finished industrial institution, we overlook the fact, that, relative to many other of the industries of man, it is a very youth. In 1830 there were but twenty-three miles of railway in operation in all the United States. In three-quarters of a century it has become the very lord of transportation.

At the very first this infant announced his mission: "I have come to carry the people of this world and their goods. Before me all others who have served man in this capacity since history was born, shall bow." And one by one all

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others have acknowledged his supremacy or paid him tribute.

But let it not be imagined that this victory has been achieved without a struggle. Every hour since this lusty infant stuck his red nose into this battling world till now, grown to young manhood, he has had to fight. The conquest of the dry land was indeed easy; for here he met no foe more formidable than the lazy old ox who, tired of his job anyway, was willing to quit. But wherever the youth came to the open sea, or the wide lakes, or the deep rivers, he met worthy enemies. Here lived those ancient warriors who had, from time immemorial, known no enemy. The waters and the winds were theirs. Surely this very boy could not drive them from their native element.

First he gave attention to those who lived on and by the river. And he said to the people they had been serving: "I can carry you and your goods faster than your old servants." But the river gods laughed and replied: "Yes, boy, you are fleeter, but we are cheaper." "I will show you," said the boy. "You will see me carrying right along your banks." And that the river gods saw, and died.

Then the boy turned his attention to the people who live by the seas and the lakes, and he said to them: "I can carry you and your goods faster and safer than your old servants." And the old

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servants said: "Yes, but we can carry cheaper." But the land god said, "I will show you." And he laid his rails around the lakes and between the ports anciently served by his enemy. And he carried cheaper and cheaper, and yet his enemy did not die. Instead he grew bigger and bigger and bigger. And the battle raged fiercely, but the land god could not conquer the water gods in the great waters. And the land god was growing weak. "Where shall I get food?" he cried. Then a happy thought struck him. He said: "These things that float can only carry between ports, while I serve everywhere. Let them carry as cheap as they will between ports. I will carry cheap there, too, but if they want anything they carry taken away from the ports, I will charge more for that service." And the deep water gods saw the point, and wherever the people they served wanted their goods sent into the interior from the ports, they, the water gods, had to pay tribute to the land god, and he took all he could.

But these were not all the wars the young giant had to fight. He had brothers and they, too, demanded the right to carry. And wherever these brothers had routes which began at the same place and ended at the same place, or wherever their respective routes crossed each other, fierce struggles for mastery issued. Seeing these fratricidal wars the cities and citizens were de-

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lighted. And the cities where the wars were carried on grew fat, because their goods were carried for less charges than were paid by other cities where there was no war. Nor was that all. Certain large and influential citizens went first to one brother and then to another, slyly saying: "If you will carry for me more cheaply than you do for my neighbor, I will give you all my business." And each brother said to himself: "I was born to carry and unless I carry I die." And each accepted the offers of the large and influential ones, until there was no profit left to any brother. But the large and influential ones, they made mighty gains for themselves out of these wars.

Out of these struggles attending the growth of our railway system, three great wrongs have grown, and with them the railways are, with more or less justice, charged.

The first of these wrongs is the granting of rebates, or lesser rates, to certain shippers than to others.

The second is the granting of very low rates to the large seaboard and lake cities where water competition exists and like low rates to cities having inter-railway competition, with corresponding high rates to localities not so favored. The result of this has been that the railways were, and yet are, compelled to make the major portion of their profits out of the latter localities.

The third wrong is, that cheap inland water

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transportation has been nearly killed, deep water transportation has had its just profits reduced more than should be, and the losses thus sustained have fallen as a charge upon the interior of the country.

All these wrongs have come about from a violation of the fundamental principle of transportation,—that it serve impartially. The results have been, in my judgment, disastrous to the railways and harmful to shippers and industries, while the burden of maintaining our railway system has been distributed unjustly and unevenly upon different parts of our country. As these subjects will recur when considering the remedies which appear from legislative enactments, I leave them for the present.

ARE THE CHARGES OF OUR RAILWAY SYSTEM REASONABLE?

No accusation has been brought against the railway of as great potency as this: that no *just principle* has governed it in fixing the rates of freights and fares which it charged its patrons for its services. It has been persistently proclaimed by individuals, industries and communities, that the only principle upon which the railway has acted in making its rate-charges, is "to charge all the traffic will bear." In other words, it is claimed, that the railway has forced all the indus-

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tries of the country to become its involuntary partners, with the right, on its part, to take the major share of the profits of all business, leaving to the producer just enough profits to keep him in business. This is a very nasty view to take of the matter. If it be the correct view, the practice is certainly little short of damnable.

But the primary fault of most men is this: they are so selfish themselves, that nothing will satisfy them except their neighbor acts from motives of pure philanthropy. They overlook the fact that every man, be he laborer, farmer, merchant, manufacturer or preacher, sells what he has for sale for the best price he can get. I do not remember ever to have heard of even a divine, who sold his horse for less than he thought the purchaser would pay. Now the railway is no more a philanthropic institution than is a hardware store. It is just this much fairer than most men in their private transactions; it does not charge the last living cent of profit which it could make.

All wise railways—and there are few which are not wise in this regard—endeavor to so adjust their charges, that they shall be commensurate with the value of their services to the shipper. People overlook the fact that, while railway charges seem in many cases to be extortionate, in many more cases they are scarcely sufficient to pay the actual cost of running the trains. It

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costs the railway no more to carry a car of ore which assays a thousand dollars a ton, than a carload assaying ten dollars a ton. Yet the latter is carried at probably one-tenth the charge of the former. This makes the owner of the thousand dollar ore charge about like an enraged bull. He is unmindful of the fact that the low grade ore was carried with scarcely any profit to the carrier, and that it is the *average of charges* which at once makes it possible for both the mining and the railway industries to flourish. Nor is it true that—in the bad sense of the phrase—the carrier charged “all the traffic could bear;” for if it had, it could have charged nine hundred dollars a ton and still have left a handsome margin to the mine owner. Traffic managers are not idiots. If you look at the charge for carrying the ten dollar ore, you will come more nearly realizing the true meaning of this phrase; for there the charges were “no more than the traffic could bear.”

But this phrase is but the superficial expression of a much deeper principle governing the railways in making rates. The railway has but one reason for its existence. It must carry. It must do business. It must turn the wheels, or rot. Now, it so happens that the majority of traffic that comes to the railway, cannot “bear” high charges. If high charges were imposed upon it, such traffic would not move at all; simply because at the end

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of its journey it would have eaten itself up in the charges of carriage. Likewise, the comparatively small amount of traffic that can "bear" high charges, is not sufficient to support the railways. What, then, is to be done? Let the railway answer.

The railway says: "Work me to my full capacity *some way*. Give me all the work you can at as high price as possible. When you have done that, get me more work at the next best price. You see I have plenty of strength left in me. Get me work that will help to pay the cost of my keeping. I want more work still. If there is any work left that cannot afford to pay more, then, get it for me even though it does not pay more than the cost of my food, my clothes and the oil that keeps my joints limber. I was born to serve and serve I will. If you find any industry, any place, that cannot afford to pay much, put its products on my back and I will carry them to the market, and bye and bye, maybe, it will be able to pay me better."

Out of this demand of the railway to be worked to its full capacity, there has grown a perfect tangle of rates. For the old railway housekeeper, the traffic manager, has had to make "ends meet" some way. He has had to adjust this jumble of rates to expenses in such a way, that the children would all be fed and a snug surplus show up at the end of each year. And in many a lean

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year there has been no surplus, and in many a year some of the children have gone hungry, and in some years the whole lot of them literally starved.

An ideal railway, as I take it, is one which earns enough money to comfortably pay (1), the cost of operating the road; (2), the cost of maintaining the road in first class shape; (3), the interest on its debts; (4), nice dividends to its stockholders and (5), have a reasonably fat surplus, sufficient to cover all contingencies. If one were to be asked which of these desirable conditions could be dispensed with and a railroad still be left, he would readily say: "A railway could get along some way without a surplus; it could reply to its stockholders that, while no dividends had been earned, it was still operating; if default was made in the bonds, the road would go into a receiver's hands, but still be a railroad. But if the road was not maintained, the winds and the rain and the worms and the rust would soon destroy its capacity to be operated, and when it is no longer operated it is dead."

Hence it is that whether a railroad earns much or little, its maintenance is a fixed charge and its operating expenses cannot be reduced below a certain minimum. It therefore follows that it is better to do business at rates which will pay interest on bonds and these absolutely necessary charges, than it is not to do business at all; for

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the railway plant is there, and, unless it be maintained and operated, it is of less value than a county highway. Hence it follows, that any freight which may be carried at any rate which will help contribute to the payment of these absolutely necessary costs, is considered freight that it pays the railway to handle.

This system of rate-making is the outgrowth and result of upwards of fifty years of practical experience in conducting railway transportation. Naturally it is complicated. And if to its inherent complexity, there be added the complications arising from the conditions attendant upon the growth of the railway, as set forth in the last section,—railway competition with water transportation, inter-railway competition, the continuous, everlasting demands of influential shippers, of cities and localities, for special privileges and preferences; it is not difficult to see that railway rates have become a terribly tangled skein, with no better defined principle running through it than, that each kind of freight should be charged according to its capacity to bear the burden of sustaining and maintaining our transportation system.

Whether this principle could be improved upon, if every form of railway preference were abolished and if all our railways were consolidated into a transportation system, remains to be considered.

Meantime, it appears to me that there are two

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deductions which one is entitled to make from the system of rate-making which has grown up. The first is: that the cost to the railway of the particular service rendered, has had—and should have had—only a feeble influence upon the rate charged. Of course, no railway should ever perform any service for less than cost, but above that, any charge which brought revenue to the road was justifiable. The second deduction is: that there is no such thing as inherent reasonableness in a railway rate, and that we have neither basis nor data on or from which to determine whether the aggregate of charges collected by the railways is reasonable and just.

The first of these deductions seems to me obvious, but the second requires more extended examination, involving as it does the wider problem; whether, as between the people and their railways, the latter receive a fair return for the services rendered the former.

DOES OUR RAILWAY SYSTEM RECEIVE A FAIR RETURN AND ONLY A FAIR RETURN ON ITS HONEST INVESTMENT?

Since the railway is a national necessity, I take this to be the fundamental principle governing the relation between the nation and its railway system, to wit: that it is as much the *duty* of the nation to see that the railway receives a *fair return*,

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as it is to see that it receives *only a fair return* upon its honest investment. For this honest investment is employed primarily for the use and benefit of the nation. And he is surely a short sighted farmer who starves the horses that work his farm.

But who is there who is wise enough to answer the question which heads this section? Certainly not I. For I do not know what the "honest investment" is, which is to receive a fair and only a fair return. The second premise is missing. And, therefore, the conclusion is unattainable. This will be obvious if you throw the problem into the customary form.

The railway is entitled to a fair return on its honest investment.

Its honest investment is——

Therefore the fair return is——

Now, since the only legitimate source of revenue of the railway is its charges for carrying persons and freights, it follows that there is no way of determining what those charges should be, until after you know what rightful demands upon the railway may be made. You know these fairly well, so far as the cost of operating and maintaining the system goes; but you can only guess what the rightful demands of its invested capital are, simply because you do not know what the invested capital is. This is a subject from which all men shy as though it were a ghost. There

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seems to be a feeling that the very bottom would fall out of all things financial, if a real, earnest, investigation were made of that subject.

It is customary for our railway friends to dispose of the whole subject of railway investment and the reasonableness of rates, by one sweeping statement, to wit: that there has never been a year in the last quarter of a century when the railway system has been able to earn or pay 3½% on its capital stock, and they add, that the returns have been as low as 1.51%. This argument would be conclusive but for one fact; it assumes the very question at issue, that the capital stock upon which this low rate was earned and paid, represents the honest investment.

Now, one of two conclusions is irresistible. In this matter of railway investment and rates, either the American people have been utterly dishonest toward their railway system, or the railway system has been utterly dishonest toward the people. Let each man take whichever horn of the dilemma suits him best. For there has never been a time during our railway era, when a considerable percentage of our railways have not been in bankruptcy, and first and last, most of them have been bankrupt at some time, and some of them more than once. There have been times when one-quarter of our entire railway system has been in the bankruptcy court.

But this it not all. No more delusive argument

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was ever advanced, than that based on the *average* per cent. of dividends paid. The inference is that because the average per cent. was low, therefore the capitalization cannot be high. The simple facts are: that there has never been a time when more than 66 $\frac{2}{3}$ % of capital stock *paid any dividend at all*; that up to 1906 (the latest report) there were only six years when more than 50% of the capital paid any income *at all*; while there have been years when more than 70% of the capital and 20% of the bonded debt, went absolutely without one cent of return.

This matter is so important and significant, that I must bother you with a table showing the billions of dollars alleged to be invested in our railways, which brought no return to the alleged investors.

Table showing railway capital receiving no return

Year	Amount	Per cent. of stock	Per cent. of bonds
1888	\$3,201,755,225	61.44	21.69
1889	3,397,291,587	61.67	18.19
1890	*2,811,526,552	63.76	
1891	3,128,183,917	59.64	9.90
1892	3,585,122,746	60.60	15.56
1893	3,602,349,704	61.24	14.39
1894	3,980,907,701	63.43	17.29
1895	4,366,201,663	70.06	16.71
1896	4,528,062,636	70.17	16.26
1897	4,629,043,117	70.10	16.59
1898	4,422,557,861	66.26	15.82
1899	3,847,919,927	59.39	10.45

* Stock only.

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Year	Amount	Per cent. of stock	Per cent. of bonds
1900	\$3,555,547,504	54.34	6.78
1901	3,190,896,228	48.73	6.23
1902	2,980,731,857	44.60	4.89
1903	2,977,609,584	43.94	4.33
1904	2,997,366,225	42.53	4.49
1905	2,884,570,733	37.16	6.36
1906	2,564,756,184	33.46	3.82

Now if these billions earning nothing, are honest capital, invested in an industry indispensable to the American people, have we not been most niggardly, yes, most dishonest, in refusing to allow them to earn a fair return or any return at all? Or shall we say that these billions earning nothing, do not represent any honest investment at all, and therefore were not entitled to any return? Whichever way we look at it, the prospect is anything but pleasant. But the important deduction from the showing is, that nobody can tell what our railways have cost, or what they should be valued at, or what the investment in them is, and therefore no one can tell what reasonable rates should be charged to bring a fair return to the investment.

However, I think some light may be thrown on the problem of what it has cost to produce our railway system, and the relation between that cost and the capitalization of the system and therefore, incidentally, some light may be thrown on the rates which would produce a fair return. It is well known that the railways keep an account

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called "Cost of road and equipment." Into this account is put every item which is supposed to have entered into the cost of the road and its equipment. As the roads have no special reason for keeping the account small, but have every reason for exaggerating it in every possible way, no injustice will be done them by preliminarily accepting their own figures. These we will compare with the capitalization of the roads, as it is shown in the amount of their stocks and bonds. These respective accounts show as follows as of December 31, 1907. (See *Poor's Manual*, 1908, p. clxiv.)

Stocks and bonds outstanding.....	\$16,501,413,069
Cost of road and equipment.....	<u>13,364,275,191</u>
Excess of stocks and bonds over alleged cost of road and equipment.....	\$3,137,137,878

Two remarkable coincidents appear from these figures showing the excess of outstanding capital above the cost of roads and equipment. The figures are about the same as the average of capital which returns no income, and the amount is about the same as the amount of stocks and bonds which the railway corporations own in each other. But neither of these coincidental facts is important at present.

The important deduction to be drawn just at present is: that if the roads were capitalized at what they are alleged to have cost, the rates which

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are now being charged, would pay interest at the rate of 6% per annum on every dollar of capital invested in the system. If, therefore, we should say that 6% is a reasonable return upon capital invested in railways, then it is evident that the rates charged at the present time are reasonable.

But a little further investigation into the account called "Cost of road and equipment," may be desirable. I speak not now of the fact that this account has been stuffed in every conceivable manner; but taking the railways' own figures for the total cost of road and equipment at the end of the year 1907, you will see that, by dividing those figures—\$13,364,275,191—by the total miles of track—224,033, you obtain about \$60,000 as the railways' own estimate of the cost of each mile of track with its equipment.

I am anxious to know whether this average cost of road and equipment has been maintained during the seven year period—1900-1907. Here are the figures.

Cost of road and equipment 1907.....	\$13,364,275,191
" " " " " 1900.....	<u>10,484,430,907</u>
Total cost of adding 32,221 miles of track	
with equipment 1900-1907.....	\$2,879,844,284
Average cost per mile.	89,377

Thus it will be seen that the average cost of acquiring road and equipment in the last seven years, has, according to their own figures, in-

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creased nearly \$30,000 a mile over the average cost throughout the entire railway era. But, remarkable to say, the average amount of stocks and bonds issued per mile of road in the last seven years, has been upward of \$143,000 or over \$53,000 more per mile than the average "cost of road and equipment." Thus, you will see that in the last seven years the capitalization has increased nearly one and three-quarter billions in excess of the cost of the road and equipment acquired, even according to their own showing. In the face of these facts, how can any one who wants to be just, come to any rational conclusion as to what rates it would be reasonable to charge to bring a fair return to the capital honestly invested in railways? We must first determine by some means what that honest capital is.

IS OUR RAILWAY SYSTEM'S MANAGEMENT SUCH
AS TO PREVENT IT BEING USED AS A MEANS
OF ILLEGAL GAIN?

The theory of a corporation

In legal theory, the property of a corporation belongs to its stockholders and is administered entirely for their benefit. As the stockholders are usually too numerous to devote their personal attention to the business of the corporation, they meet at stated intervals and elect a certain num-

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ber of their members to represent them in the active management of the business of the corporation. These elected members are called directors or trustees.

The relation between the trustees and the body of shareholders is one of trust and confidence, and is governed by the same legal and moral principles which govern the relations between any other trustees and their beneficiaries. These trustees are not allowed to engage in any undertaking which is antagonistic to the interests of their beneficiaries. They cannot make any personal gain out of the use of the property or funds of their wards, nor can they use any information which they have obtained as trustees to their own advantage. They are bound at all times to keep their beneficiaries fully and fairly informed as to any matter affecting their interests or the property which is the subject matter of the trust. Taking it for all in all, this trusteeship establishes the most delicate relation known to the law, and calls for the highest order of honorable dealing.

The corporation in practice

But too often the corporation in theory and the corporation in practice are widely different. The trustees, often elected by their own votes and the votes of their satellites and perpetuated

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in power in the same way, come to regard themselves as the corporation. The rights of stockholders are ignored, important information concerning the affairs of the corporation is withheld or given to the stockholders on demand most grudgingly and misleadingly, or denied in toto, while the corporation trustee who would shrink from making personal gain out of the information which came to him by means of his position of trust, is indeed, exceptional. If I mistake not, most railway managers regard it as their special prerogative, to make money for themselves by means of the information gained by them as managers, and by them withheld from the body of stockholders. Where would one look to find a railway trustee who, knowing that an important fact engineered by himself and affecting the value of the securities of his road was about to be made public, would hesitate to make profit for himself before informing his fellow stockholders of the fact? If dividends are to be increased, decreased or suspended, if valuable connections are to be made, if rumors themselves are to be floated, shall not the manager use his knowledge to feather his own nest? To ask the question is to answer it. By just such means has the fortune of many a railway manager been piled up into the millions. He would spurn the imputation that he had done anything wrong or dishonorable. He would have considered it boyish not to have availed himself

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of his position. Instances are not wanting where trustees have even borrowed the funds of their corporation to speculate with in the securities of their own and other corporations. Nor is the case unknown of trustees unloading their own bad investments upon their corporations, or the sale to them of securities at most exaggerated prices. Nor need I more than mention the well known fact, that, from the first, it has been an all-too-common custom for railway directors to be interested in contracts for construction work, which contracts they made as trustees with themselves; or in syndicates and banks underwriting and buying the securities of their corporations, sometimes at unwarrantable discounts.

The law condemns as utterly illegal every transaction between a director of a corporation and his corporation, in the making of which he participates. But, it is said, there is no law governing any transaction involving more than a million dollars.

How managerial control is perpetuated

In this book reference has been made to the control of railway corporations by virtue of the stocks which they own in one another. There are but comparatively few of these corporations having only one kind of stock. Generally speaking, they all have both common and preferred

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stock, the relative amount of these being about four shares of common to one share of preferred. On June 30, 1906, the gross amount of outstanding common was \$5,403,001,962 and the preferred \$1,400,758,131. It is rare that both kinds of stocks participate in the election of trustees. In some corporations only the holders of the common stock are allowed to vote; in others only the preferred shareholders and in a few both kinds have voices in the election of directors.

Now if one, or a number of men, or if one, or a number of corporations, desire to obtain control of a particular corporation, it is obvious that all that is necessary is to acquire the command of a majority of the particular kind of shares that have the voting privilege. When you recall that the capital invested in the bonds of a railway corporation has absolutely no voice in the management of its affairs, and that generally only one kind of stock has the voting privilege; it may be readily seen that a *particular corporation may be dominated and controlled by the owners of a small minority of the invested capital, and that all the railway corporations in the United States may be dominated and controlled by a small minority of the total invested capital.*

This matter is of so much importance that it is necessary to fully demonstrate and impress it upon the student. Thus on the 30th of June, 1906, according to the statistical reports of the

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Interstate Commerce Commission, the following amounts of the different kinds of railway capital existed.

Bonds (of all kinds).....	\$7,766,661,385
Common Stock.....	5,403,001,962
Preferred Stock.....	<u>1,400,758,131</u>
Total.....	\$14,570,421,478

It is obvious that at the utmost, no more than 51% of the aggregate of common and preferred stock was necessary to the control of this entire capital. In other words, the command of not more than \$3,401,880,046 of the capital was necessary to dominate and control fourteen billions and a half. The command of less than 25% of the capital can command the whole.

But let no man imagine that it is necessary to command 25% or anything like it, to command the entire railway capital of this country. The railway corporations have fixed that matter so that the control of 5% or 10% of the aggregate capital of some corporations, is all that is necessary to obtain and hold dominance in those corporations. In the first place, it is rarely the case that both the common and the preferred stock have voting privileges. These are usually conferred exclusively upon one or the other. So that the utmost amount necessary to be commanded to control the entire system, is less than \$2,702,000,000 or about 18%.

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But when you turn to particular corporations you will be simply dumfounded to learn the relatively small percentage of their aggregate capital which controls them. Thus the Rock Island Company controls 14,269 miles of railway, the total capital of which is \$777,000,000. This entire system and its capital is controlled by a majority of the preferred stock of the Rock Island Company, the common stock not having voting privileges. The preferred stock outstanding June 30, 1907, was \$49,047,390, 51% of which, the utmost necessary to control, is \$25,014,168, or a little over 3% of the entire capital! If, now, you take into consideration the further fact, that on the day before Christmas, 1908, as I am writing these lines, the preferred stock of the Rock Island Co. is selling at 61 cents on the dollar, you will perceive that by some legerdmain of railway finance, an investment of \$15,000,000 controls an investment of \$777,000,000.

This process of obtaining control of our railways has been going on for years under the eyes of Congress and the Interstate Commerce Commission; yet, so far as I know, the former has never deemed it worthy of its consideration—at least not of any action—and the latter passed it by without serious comment until last year, when—the damage having been mostly accomplished—it became suddenly jolted by the fact. After briefly reviewing the conditions as though they

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were something newly discovered, it concludes its summary of one company as follows:

“This holding company [Atlantic Coast Line Co.] with a comparatively small capitalization, which represents less of actual investment, probably not more than \$5,000,000, is in virtual control of railway systems over 11,000 miles in length.”

But the significant and all-important fact to be seen in this *control* of railway corporations, is not the fact that it has consolidated railway interests, a result, in my judgment, both inevitable and justifiable, nor the fact that the control is by virtue of the ownership of large quantities of stocks by individuals; but the fact that *the control is vested in corporations by virtue of their ownership of the voting stocks of each other*, thus giving their managers or trustees unlimited capacity and opportunity to make for themselves illegal gain. The process is practically as follows: The trustees use the funds of their corporations to buy stocks in other corporations for their own corporations. These stocks, do not of course, belong to the trustees, but, *by virtue of their office*, they not only vote them at elections but they do with them whatever else they want to do short of giving them away or stealing them outright. They buy them and they sell them when they want to. As the aggregate of securities owned by corporations in each other, and, therefore, most largely subject

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to the control of their trustees, is over three billions of dollars, it must be obvious that corporate dealings in each other's securities have a potent influence upon the market for railway securities. Thus the trustees, exercising their discretion to buy and sell the securities of their corporations, are in a position to influence the stock market without involving their private fortunes otherwise than to take advantage of the markets thus made or unmade. Given this reserve of three billions of securities for their stock-market capital, it is not wonderful that they are able to pick up an honest living for themselves.

The immensity of railway transactions

Railway transactions, physical and financial, are so stupendous that the figures representing them no longer find response in the human mind. Differences of a hundred million one way or the other pass unnoticed. Calculations based upon the statistics of last year, are apt to muddle the figures of this year. Even the best and most painstaking collectors of railway facts are widely at variance. For instance *Poor's Manual*, the recognized commercial authority on railway matters, gives the number of miles of completed railroads at the close of the fiscal year June 30, 1907, as 224,382.19, while the statistical report of the Interstate Commerce Commission for 1907 states that "On June

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30, 1906, the report shows that the total single-track railway mileage in the United States was 224,363.17 miles " (*Report*, 1907, page 152). From this one would infer that the mileage had increased from June 30, 1906, to June 30, 1907, just 19.02 miles. At the same time we are definitely informed that the mileage actually increased between those dates nearly 6000 miles. And if we compare the reports of these two authorities on the same date, June 30, 1906, we find that Poor gives the completed mileage on that date as 218,433 miles, which is nearly 6000 miles *less* than is shown by the Interstate Commission statistics as above stated.

If from the mileage figures we turn to the capitalization figures, we are still more surprised at the differences shown. Poor gives the outstanding capital stock on June 30, 1906, as \$7,106,408,976 (*Manual*, 1907). The Interstate Commerce Commission gives it as \$6,803,760,093 (*Report*, 1907, page 154). In other words, Poor's mileage is 6000 miles *less* and stock capitalization \$300,000,000 *more* than the Interstate Commerce Commission report shows on the same date. Doubtless these trifling differences are capable of explanation, but the figures are given just as they appear in the hope that I may be excused, if in this book I may be so unfortunate as to have gotten a few hundred millions away from the exact facts.

Again, as of June 30, 1907, Poor gives the total

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of railway assets as \$18,649,289,250. So far as this argument is concerned, it makes no difference whether the total be a billion one way or the other. *The important point is, that no such wealth as this was ever before, in the world's history, placed under the management and control of a few men.*

When we stop to consider that at least one-sixth of the wealth of the whole country is held in trust by a dozen or so of the dominant spirits of the American railway world; that they have in their service more than a million and a half of men, representing seven millions and a half of the people of this country—a twelfth of its population; that the instrumentality with which they deal is the very life blood of the nation; and when we see this mighty mass of wealth, like a stupendous sky-suspended pendulum, regularly swaying back and forth, back and forth, ever gathering its load on one side and dropping it on the other; when we soberly consider these things they must make us pause.

Is not the confidence of the American people sublime, that they have permitted these few men to vest themselves with a trust and power so gigantic? And is not this confidence especially sublime, when we remember that this trust and this power are vested to be exercised at the will of the trustees, acknowledging no court to call them to account? What good men these trustees

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should be, how untainted their histories, how unselfish their devotion to their trust, how above suspicion that they would use it for their personal gain—and, of course, they would not and have not and will not. Sleep on blind nation! Your trust and confidence are sublime!

And how comes it that these men were able to invest themselves with this trust? Did they create the wealth that they control? No, admittedly no. Then how came they into this absolute control of that they did not make and do not own? Genius, genius, not in creating wealth, but genius in obtaining the use of other men's money with or without the knowledge of its owners. Genius, also, in using the money of their roads to buy up one another. And, therefore, genius in watching and standing by, one another; until now no power can divest these men of their trusts, except, of course, the possibility of a falling out among—themselves.

Such, in brief, is the control of one-sixth of a blind nation's wealth. Verily these trustees may say, after their great exemplar, that, considering their opportunities, they are amazed at their moderation.

In the way of justice

If any one has read this section, he will remember that it is headed by a question, not by an assertion. "Is our railway system's management

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such as to *prevent* it being used as a means of illegal gain?" The whole force of the question lies in the word *prevent*. I would have a system that does prevent the possibility of the illegal use of this great trust. I do not assert that all our great railway men have been violators of their trust. On the contrary, I distinctly aver that there have been railway men, and great ones too, who have as faithfully administered their trusts as ever honorable guardian did the property of his infant ward. But there have been other railway men, and great ones too, whose native honesty has been subordinated to the accomplishment of a fixed purpose.

Great men are distinctly of two kinds; those who do great deeds, and those who do great deeds justly. And of the latter there are but few. Men in the accomplishment of their ends, must use the means and methods that are open to them, and these means and methods are generally neither such as they like to employ nor such as are best fitted to accomplish the desired end.

Now, in this country, the last quarter of a century has been marked by the presence of some half score of men, possessed of an order of organizing genius such as the world never before witnessed. They found our industries unprofitably cutting each other's throats, and they organized them into industrial aggregates whose producing power has stunned the world of trade and com-

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merce. Incidentally enormous profits have come to themselves and to others. Most men have looked upon these great organizers as mere sordid money-getters. Money-getters they have been, sordid they may have been, but I do not believe they have been *mere* sordid money-getters. Because I believe that at the very base and foundation of all great minds, the moving, irresistible impulse must ever be to *do great things, and to be the means whereby things shall be done better*. To them, poor and self-destructive ways of doing things are intolerable. There is a kind of philanthropy in what they do, for they know that in the end their fellow men will be better served than they were before. But the methods they employ are often anything but philanthropic. And this is so, not because the methods used were such as they would have selected, but because they were debarred the use of such methods as their own intelligence would have suggested.

To apply these suggestions to the matter in hand: the disjointed and unorganized railroads of the United States had to be joined and organized. Now, if the people of the United States had asked Mr. Morgan, Mr. Hill, Mr. Harriman and a half dozen other men, to sit down and devise a transportation system for this country, does any one suppose that these men would have suggested the method of organization that they have pursued? But the people of the United States did not ask

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these men to organize a transportation system for the country. Exactly what the people said to these men was: "You *shall not* organize a transportation system for this country; you shall not even talk about it: if you do we will put you in jail." But the skeleton had to be articulated, the nerves brought together and united and the whole organized, human laws to the contrary notwithstanding. For this was nature's law. With the tools that these men were allowed to use, it has been a clumsy and a painful and a costly surgical operation, and it is destined to be still more so if the people do not permit of the use of more improved instruments. Meantime I do not know that surgeons Morgan, Hill, Harri-man et al. need be worrying about the terms of their employment.

IS OUR RAILWAY SYSTEM FREE FROM A CORRUPTING INFLUENCE UPON AMERICAN LIFE?

When great-minded men set out to accomplish great deeds, whatever opposition shows itself must be disposed of. What they need they take, what opposes them they kill. It was ever so since the days of Julius Cæsar and before. With eyes set ever to the front, they see not the wreck and ruin that strew their onward march. Laws! what are laws but appeals and repeals? Over these man-made laws is the grand law of doing, accomplishing. And time! how short is

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time when so much is to be done. Nerve-racking impatience suggests the quickest remedy: no dog e'er barked whose mouth could not be stopped with meat enough. And, therefore, feed the yelping and disturbing brutes. Contempt for men sits on the brow of the great-minded. For what are men, their laws, their legislatures, their courts, but instrumentalities wherewith to do the great deed? And if they will not work to that end, why then, work them.

If you were to search your memory for the origin of the great scandals which in the last half century have disgraced American life, individual, municipal, state and national, you would have difficulty in finding one of a monumental character which could not be traced directly or indirectly to the doors of our industrial barons, and among these the chief offenders have been the various kinds of transportation barons. The record is too shameful to be printed. From the days of the Credit Mobilier to the next to the last presidential election, their hands have always been in politics and wherever shown have always been dirty. They originated the legislative lobby. Whenever there was anything they wanted done, or wanted not to be done, in the city, the state, or the nation, they have kept their human chattels in the council, the legislature, the congress. They have bought and owned municipal boards and legislatures as though they were shares of

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their own stocks. They have bred a distinct variety of politicians—men who get into office to sell themselves. In some parts of the country popular government has ceased to exist, the elective franchise being exercised in the office of the railway company that dominates the state. These men have been courted by, and in turn have demanded the allegiance of political parties. They have spent their money to elect presidents of the Republic, and have shamelessly called the fact to public attention when measures have been proposed contrary to their interests.

Will you tell me these things can be and the public conscience escape corrupting taint? Look at it broadly. What is the all-potent argument addressed to voters to-day? To the laborer it is this: vote thus, or you will lose your job. To all others it is this: vote thus, or you will lose your money. Will you tell me that such an appeal could have become universal, but for the fact that it is addressed to a corrupted populace? The truth is our financial barons have set the example of wrong-doing on a scale so magnificent that the millions have rushed in each for his small share of the plunder. When a free people can say: "Feed us and we will be your servants," they are no longer free.

WHY OUR RAILWAY SYSTEM IS AS IT IS

We have seen that our railway transportation

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system—magnificent as it appears to be as a physical fact, and stupendous as it appears to be as a financial operation—is grossly lacking in the qualities which an ideal system should possess. We have seen that the measure of safety it affords is greatly below that of railways elsewhere in the world, that it has but two-thirds the efficiency required, that it is grossly wasteful in its physical operations, that as a financial operation, it is a disgrace alike to itself and the country which fostered it, that it has been at all times at enmity with the people and that in its attempt to destroy opposition, it has corrupted the American conscience.

If, now, we inquire why our railway system has grown up and developed into something so different from what it should have been, we will not have far to go for the answer. Even at the risk of being called unpatriotic, I am compelled to say the reason is, because the system has been and is so essentially American. It is bone of the bone, flesh of the flesh of our country. I doubt whether it could have been produced any place else on earth except in America. Not only is the system, itself, but the men who manage it and the people who suffer under it, all alike American.

Brushing aside all minor causes, all mere incidents, all sports and offshoots, and looking only for the fundamental cause of the divergence of our railway system from the best type, we will find

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that cause to be this: it has grown up acknowledging responsibility to no power and with no power capable, even if desirous, of imposing responsibility upon it.

It is the chief glory of the Anglo-Saxon race that whatever responsibility it acknowledges is self-imposed and this conception of responsibility has been deified in the United States. This self-imposed individual responsibility has been extended to those aggregates of individuals called corporations. They also have demanded the right to be a law unto themselves, to be allowed to govern themselves, to resent every effort of the state to restrict or restrain them—to interfere with them in any way. And for the most part and *in all great and essential matters*, they have had their way. And not one man in a thousand will be found to say that this is not for the best. Deep down underneath the hundreds of puny, pestiferous laws being daily enacted, will be found this fundamental conception in the mind of every American: we cannot tolerate the restraining hand of government upon individual or corporate enterprises; on the contrary, if government has any function at all it must be shown in the encouragement and protection of individual and corporate enterprises. And hence, individual individualism and corporate individualism have run riot in these United States. Hence it is that our railway system has grown up with no governing

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hand upon it; on the contrary the governing hand has fed it with gifts of principalities.

If the system is over-capitalized why should it not be? Has there been anything to prevent it? If stock has been a fiction, was there any law requiring it to be real? If we have bred a race of giants, are they not our giants, suckled at the breast of America? If these giants now hold in their keeping a sixth part of our wealth and the very welfare of our country, are we still not justly proud of them as the greatest product of unrestrained individualism? If justice herself has been subordinated to individualism, may we not still say: "We have been faithful to our ideal."

In the development of our respect for individualism we have lost the sense which distinguishes acts which are criminal. To steal bread is a crime, but to manipulate a market so that thousands will be robbed of millions, is individual enterprise! The till-tapping railway clerk is a criminal, but the railway trustee who votes a stock dividend of thirty millions, is a gentleman engaged in industrial enterprise!

Society exists for the protection of the individual. Yes, truly; but when shall we come to realize that the individual who persistently *works* the society for his own benefit, is no longer an individual. Call him by whatever name you will, the essential fact is, that he has turned the table on society and become the ruling power.

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Thus it is that a country may be so free that it does not recognize the power that rules it.

And this irresponsibility of our railway corporations has been splendidly fostered by our dual form of government. To the states the corporations owe their origin; often their physical operations and their very properties lie in several states; while the United States exercises over all its national power to regulate commerce among the states. Divided authority is and ever has been no authority. And, therefore, our just fear of the concentration of power in the federal government, the relatively small scope of state authority, the indifference shown by some states to the exercise of the authority they have, the open bidding by some states for corporate immunity from control and sundry lesser influences to be hereafter mentioned, have all played for the increase of corporate irresponsibility.

Not that we have not done something—nation and state—in the direction of controlling our railway system. But when I look at the efforts which have been made and the results which have been attained, I am not greatly impressed. The laws which have been aimed at it have pestered it, like pin sticks. It has been angered not controlled or made better. The main trouble with all our railway and corporate laws is, that they have been *anti*. They have been destructive not constructive. They have been piecemeal,

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not comprehensive. There has never been a law nor, I believe, the suggestion of a law, looking to the organization of our railways into a unified and harmoniously working transportation system. Oddly enough, our legislative efforts seem to have been directed at the prevention of a comprehensive transportation system. To this end our railway men have been working.

These *anti* laws obstructing the natural course of railway organization and development, have been potent forces urging our railway managers to the use of means and methods which they would not otherwise have adopted. At any rate this much may be said: From the standpoint of the public welfare, our railway managers could not have done worse if there had never been an anti-railway law upon the statute books of either state or nation. If twenty-five years ago congress had passed a ten line act it would have saved this nation billions of dollars. It might have read something like this: Railways engaged in interstate commerce, may consolidate at will, but the capitalization of roads so consolidated shall in no case exceed the aggregate value of their properties. Railway corporations are prohibited from owning the securities of one another. Rates may be charged sufficient to bring a return of —¹ per cent. on the invested capital.

¹ Whatever per cent. the lawmaking power might have deemed reasonable.

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If there have been laws against railways, and there have been an abundance of them, then there must have been wrongs, actual or imagined, at the correction of which these laws have been aimed. From thirty to fifty, more or less, legislative bodies per annum, an equal number of governors, sundry commissions, a national congress and numerous chief executives, all filled with patriotism, with anxiety for the public good, with probity and honesty, have had fifty years and more, with numerous changes of political parties, platforms, policies and personnel to view and study the growth of our transportation system. What in it of wrong has appealed to them as worthy of the exercise of their several and collective wisdom, we will now review.

PART II

LEGISLATIVE ATTEMPTS TO CORRECT WRONGS IN OUR TRANSPORTATION SYSTEM

LEGISLATION CONCERNING SAFETY

The principles of railway accident law

IF one may but penetrate the enthroned mystery of the law and its administration, he will find them governed by a comparatively few great principles. Thus, for instance, the law is essentially the science of remedies for wrongs. It is not essentially a science for the prevention of wrongs, except in so far as its remedies may deter the commission of wrongs. The law rarely defines what the exact conduct of the individual shall be. It leaves ways and means to the individual, with this injunction;—that they shall be such as will not result in injury to others.

The great remedy of the law for injuries is damages. And until recently, such has been and still generally remains, the principle of the law governing the relations between the railroad and those who travel and ship their goods by it. What constitutes a railway is well known, but the law

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does not define the specific means which the railway shall employ in performing its obligations. It says the essential thing is, that the railway shall safely carry; the employment of the specific appliances by which this is accomplished is left to the carrier.

I would not have it understood from this that legislators are indifferent as to the number of people who are killed and injured. Their attitude has been rather that of helplessness; as one should say: "I know no way to prevent these things. All I can do is to give damages when wrongs have been suffered." The prevention of accidents by law would be the very crown of legislative wisdom, but how can it be done?

Now, in my opinion, this attitude of the law toward the railway in the matter of accidents, is both wise and unwise. It is wise, in that it can scarcely be expected that the ordinary legislator can know either so soon or so well as skilled railway men, what technical means and appliances can best be employed by the railway to prevent accidents. It is unwise, in that it assumes that skilled railway men will employ the best means and appliances of which they have knowledge to prevent accidents. Naturally one would think that they would do so. But they have not done it and they are not doing it. There are many reasons for this but the all-sufficient one is, that

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railway men do not differ in this respect from manufacturers and people in general. They "just get along" with what they have been using as long as they can.

This general attitude of slipshodness, indifference and penuriousness, has been strengthened and perpetuated by another great principle of the law of accidents. It is the boast of the law that there can be no wrong without a remedy; but that is not the principle to which I now refer. The legal principle to which I now refer is quite the opposite of that last mentioned. It might almost, although not quite rightly, be stated thus: There is no wrong from which a workman can suffer for which he has a remedy. He who works where it is dangerous to work assumes the risks of the business. He need not work unless he wants to, ergo, if he works he must take upon himself the risk of being killed. Moreover the employer is not bound to provide his servants with the best and safest appliances. Whatever appliances are provided, so long as the servant knows what they are, and he is presumed to know them, he takes all the risks. Now, since the overwhelming majority of those who are killed and injured in railway accidents are railway employees, and since the railway is not liable in damages for injuries to employees; why go to the expense, often enormous, of installing safe appliances?

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Again, while it is certainly true that legislators do not so soon or so well as our railway managers know what methods and appliances are best calculated to prevent accidents, and therefore should leave their adoption to the railways, yet obviously this principle of legislation can have no application to such methods and appliances to prevent accidents as have been known for years to all men of even moderate intelligence, and to such methods and appliances as have had years of trial and have been found to produce the desired result. And this is especially true, when it is known that the use of such methods and appliances exactly distinguishes the safety of railway operation in all other countries, from its extreme dangerousness in this country. When the railways of this country refuse to adopt these best methods and appliances to prevent accidents, and our legislators refuse to compel their adoption, their course can be characterized as nothing less than legislative cowardice. To call it legislative conservatism is to abuse that name.

It may be that to the railway corporations it is cheaper to take chances and pay damages than to make changes, but it seems to me that it would be better and cheaper for *us* to *prevent* as far as possible, the killing and maiming of these one hundred thousand people every year, rather than to rely for our remedy upon the damages the railways may pay; *especially since the railways must*

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collect from us the money which they pay to us for killing and maiming us.

It is my purpose to inquire what methods and appliances our legislators have compelled our railways to adopt. In short, to inquire what legislation we have had looking to the prevention of accidents rather than to their compensation in money damages.

Kinds, classes and groups of railway accidents

The first step in the ascertainment of the causes of railway accidents is to classify them. For about twenty years past the government has been collecting information concerning these accidents, such information being published yearly in statistical reports, which often contain valuable suggestions concerning the causes of these accidents and the means of their prevention. From such information the statisticians have grouped railway accidents under fifteen headings. They have also segregated casualties to employees from those to passengers and other persons. For the purposes of this book the government groupings are adopted, but in the tables which follow no segregation of the different classes of people injured by the same kind of accidents is made. The first table shows the various kinds of accidents and the percentage of each particular kind to the whole number of accidents, for the year ending June 30, 1906, the latest full report issued.

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Kind of accidents	Killed	Injured	Total	Per cent. of total
(1) Coupling or uncoupling.	298	3884	4182	3.86
(2) Falling from trains, locomotives or cars in motion.	973	7293	8366	7.72
(3) Struck by trains, locomotives or cars at highway crossings.	929	1892	2821	1.90
(4) Struck by trains, locomotives or cars at other places.	5563	5304	10,867	10.03
(5) Collisions.	658	8383	9041	8.34
(6) Derailments.	387	4831	5218	4.80
(7) Parting of trains.	20	652	672	.62
(8) Locomotives or cars breaking down.	28	352	390	.33
(9) Overhead obstructions.	91	1127	1218	1.11
(10) Jumping on or off cars, trains or locomotives in motion.	766	8916	9682	8.93
(11) Handling traffic.	13	3072	3085	2.84
(12) Handling tools, machinery, etc.	31	11,885	11,916	11.00
Carried forward	9757	57,601	67,358	61.48

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Kind of accidents	Killed	Injured	Total	Per cent. of Total
Brought forward	9757	57,601	67,358	61.48
(13) Getting on or off locomotives or cars at rest.	8	1052	1060	.97
(14) Handling sup- plies.	14	5981	5995	5.53
(15) Other causes.	839	33,072	33,911	31.30
Totals	10,618	97,706	108,324	99.28

It will at once be observed concerning the above table, that the accidents covered by classes 1-10 inclusive, are such as are most largely peculiar to the operation of railways. Classes 11-14 inclusive, are not so distinctively peculiar to the railway industry. While probably more numerous than in kindred industries, I think it unjust to charge them specifically to the railway account. As to class 15, comprising so large a percentage of the whole, it can only be said that the causes are so numerous as to render it impracticable to deal with them here. Nor is it necessary so far as the main argument is concerned. I desire to give the railway the benefit of every possible doubt, and to eliminate from this terrible list every accident with which it may not be properly chargeable. A considerable number of accidents occur to persons alleged to be trespassers on railway property. They are included in the above table. For the purpose of doing full justice to the railway, I have prepared another table,

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made up from the first one, but in the second, classes 11-15 inclusive and all accidents to trespassers are eliminated. This second table is as follows:

Kind of accident	Killed	Injured	Total	Per cent. of total
(1) Coupling or uncoupling.	298	3884	4182	9.92
(2) Falling from trains, locomotives or cars in motion	613	6617	7230	17.25
(3) Struck by trains, locomotives or cars at highway crossings.	679	1666	2345	5.59
(4) Struck by trains, locomotives or cars at other places.	1544	2724	4268	10.18
(5) Collisions.	626	8338	8964	21.34
(6) Derailments.	353	4746	5099	12.17
(7) Parting of trains.	15	635	650	1.55
(8) Locomotives or cars breaking down.	24	359	383	.91
(9) Overhead obstructions.	91	1127	1218	2.90
(10) Jumping on or off cars, trains or locomotives in motion.	310	7246	7556	18.03
Totals	4553	37,342	41,895	99.84

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Source of information concerning railway accidents

Those who have had occasion to notice the newspaper reports of railway accidents, can not have failed to observe the mystery in which they are quite universally shrouded. Nor can one often get any information from railway officials. Trainmen and other employees are always officially dumb. Turn to higher officials, and one is always put off with no information or misinformation. It is often most difficult even to send telegrams from stations near where wrecks have occurred, if they contain any information concerning the cause of the disaster. It is something not to be talked about—to be hushed up and forgotten as soon as possible. The only explanation which the public gets from the railway is that the cause of the wreck is “unknown.”

There has never been any federal law and until recently, only a few state laws, requiring an official investigation of accidents on railways. The customary coroner's inquest, conducted by persons having no expert knowledge, resolves the usually conflicting evidence into the usual verdict, “that the deceased came to his death” etc.—but fails to place the responsibility.

For many years the federal law has required railway companies to report to the Interstate Commerce Commission annually, all accidents which occur on their respective roads, and since

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1901 they have been required to make monthly reports of all accidents to passengers and employees. Thus the sole source of information which the public and the government have concerning railway accidents, is the railway itself. In other words, railway officials furnish all the data we have concerning accidents and their causes. Now, it is hardly to be expected that one, having a free hand, will maximize his own derelictions. It is well known that railway accidents frequently lead to serious litigation against railways, resulting in heavy damages. It requires a quite unexpectedly lofty conscience in a railway official to acknowledge that his road was in the wrong, under such circumstances. On the contrary, giving them credit for all the honesty and fairness that could be expected, railway official reports of accidents are to be received with grave suspicions. A simple illustration taken from the aggregates of 1906 will show the truth of this. Of persons who were neither passengers nor employees, there were 6300 killed and 9932 injured. Of the number killed 5381 were trespassing and 919 were not trespassing. Of the number injured 5927 were trespassing and 4005 were not trespassing. In other words $\frac{5}{8}$ of those *killed* were trespassing while $\frac{3}{8}$ of those *injured* were not trespassing. Obviously dead men tell no tales. The survivors served better in the reports.

But these reports are not only subject to grave

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suspicion as to the information they give, but also as to that they omit. The commission endeavors to keep some record of accidents as they are reported in the daily papers. The commission reports the failure of sundry railroads to include in their sworn reports many accidents, some even of most serious character, and their attention being called to the fact, the only excuse is that the omissions were through oversight. But this does not greatly strengthen our respect for their accuracy, especially as omissions of necessity diminish the number of accidents which actually occur.

There is another respect in which these reports, and hence all deductions from them, are unreliable. No person is reported "killed" in a railroad accident, unless he dies within twenty-four hours of its occurrence. All others are merely injured. Of course it is well known that many a sufferer lingers more than twenty-four hours. If those who die within the 90 days usually allowed by accident insurance, were added to the list of "killed," it is not improbable that their number would be doubled.

Is there a natural law of railway accidents?

In 1888 the railways were responsible for injuries to 31,170 people; in 1906 for 108,324. What is your interpretation of these figures?

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Will you say that those who have to do with the operation of our railway system, were more than three times as negligent in 1906 as they were in 1888? Or will you say that our railways were three times safer in 1888 than in 1906? If you came to either of these conclusions, I think you would be greatly in error. What then is the correct interpretation of these figures?

Before attempting to answer this very important question, I beg to impose upon you the disagreeable task of running your eye down these columns of figures showing the number of killed and injured in railway accidents each year from 1888 to 1906.

Year	Killed	Injured	Total
1888	5,282	25,888	31,170
1889	5,823	26,300	32,122
1890	6,335	29,027	35,362
1891	7,029	33,881	40,910
1892	7,147	36,652	43,799
1893	7,346	40,393	47,739
1894	6,447	31,889	38,336
1895	6,136	33,748	39,884
1896	6,448	38,687	45,135
1897	6,437	36,731	43,168
1898	6,859	40,882	47,741
1899	7,123	44,620	51,743
1900	7,865	50,320	58,185
1901	8,455	53,339	61,794
1902	8,588	64,662	73,250
1903	9,840	76,553	86,393
1904	10,046	84,155	94,201
1905	9,703	86,008	95,711
1906	10,618	97,706	108,324

If there can be found anything gratifying in these columns what is it? With deadly precision

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the number of casualties increase every year, except two. In 1894 the casualties decreased 9403 over 1893. In 1897 there was a substantial improvement over 1896. Verily, it looked in 1894 as though we were in the way of conquering the foe of traveler and employee. Here was a most decided improvement. But O, beware of statistics! They are worse than the traditional sand foundation—heartless, merciless deceivers. The truth is, what decreased were traffic and the number of employees.

Obviously in comparing railway accidents for different years, it is necessary to take into account other differences in railway facts and conditions in the years compared. Now, there are several railway factors which must always bear a fairly constant ratio to one another in different years, else the railway business is not properly conducted. These may be roughly described as the load which is delivered to the railway, the energy expended in carrying the load and the product of the expended energy. Thus there must exist a fairly constant ratio between (1), the total volume of railway traffic; (2), the number of employees; (3), the gross earnings; (4), the operating expenses and (5), the income from operations. Unfortunately railway accidents must also bear a very constant ratio to all these other railway factors. They, too, are a product of railway operation.

Roughly speaking, it may be affirmed that railway accidents increase or decrease in proportion to the number of employees and the volume of the traffic. Then, since the number of employees depends upon the volume of the traffic, you may leave the number of employees out of consideration and simply say: Railway accidents are in proportion to the volume of the traffic.

But you would be very far from having found a rigid law governing accidents, because, while the volume of the traffic is the determining factor, there are an almost infinite number of other factors ever causing variation. It would not be very far from the truth if you said: *Under like conditions*, railway accidents are in proportion to the volume of the traffic. But in no two years are the conditions the same, on no two roads are the conditions the same and the conditions vary on different parts of the road of the same company. These conditions vary all the way from the greatest unsafety to the greatest possible safety. All that the law says is, that under like conditions the number and kinds of accidents will bear an approximately definite ratio to the volume of the traffic. But these conditions are so well known that, if you knew the volume of business that will be done in this coming year, 1909, you could on the first day of January calculate with approximate accuracy, the total number of casualties that will be shown at the end of the year, and the total

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number of people who will be killed and injured by each kind of railway accident.

But let us not be depressed by this showing. It does not mean that railway accidents must forever continue as numerous as they have been this year. What the law means is this, that, even if conditions were changed so as to produce the greatest possible safety, still the doubling of the volume of traffic would double the accidents. If, for instance, it were possible to reduce the number of railway casualties this year to ten thousand, then if next year the business were to double, other conditions remaining the same, we could expect nothing less than twenty thousand casualties.

Causes of railway accidents from the railway standpoint

Railway men know the causes of railway accidents as well as you know the prominent objects to be seen along the road which you have traveled a thousand times. But they will not admit the underlying, deep-seated causes. They will tell you that they as much expect railway accidents to occur as they expect railways to be operated, and that they expect them to regularly increase in number in the future as they have in the past. But they will not admit that there is any inherent necessity for railway accidents.

On the contrary they will tell you that they have devised a set of rules for the government of railway operations which, if absolutely obeyed by railway employees, would render accidents practically impossible—that every accident implies a blunder, or a wilful disobedience of rules and orders, on the part of employees.

From the railway standpoint, the safety of railway operations depends entirely upon the care and obedience of employees, and not in any degree, or at least in any considerable degree, upon the appliances used. And to clinch the argument, they will tell you, and it is the fact, that a poorly constructed and equipped road may be operated for a considerable period without an accident, while a calamity may occur on the best built, double-tracked road, having the most improved equipment and guarded by every safety device which ingenuity has invented. And, therefore, railway managers are, for the most part, opposed to legislation requiring them to use devices calculated to lessen the dangerousness of railway operation. What is required, they say, is greater care, greater obedience and greater discipline on the part of the employees.

But railway managers overlook the necessary implications of their arguments. They overlook the all-important fact that notwithstanding the perfection of their rules, orders and regulations, accidents do happen and therefore, that these

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rules, orders and regulations are not in and of themselves preventive of accidents. From some cause they do not accomplish what they are intended to accomplish. And as to accidents on poorly constructed, guarded and equipped roads, the able antagonists of preventive legislation overlook the further all-important fact, that if traffic were as heavy on such roads as it is on first class roads, the occurrence of accidents would be a continuous performance. And, therefore, the question is: What should be done to prevent accidents when and where real railways are operated under conditions most likely to be productive of accidents; that is, where real railways are operated to the full limit of expedition, capacity and efficiency?

Thus the rock upon which the railway managers and those who favor preventive legislation split is exactly this: Shall we depend for greater safety upon exacting still greater care from railway employees, both for their own safety and the safety of the public, or shall we depend upon the compulsory adoption of appliances which remove the necessity of such great care on the part of employees? In other words, shall we make the railway inherently safe, or as safe as possible, independently of the care of the employees. This is a question not so entirely easy of solution as you might think. Broadly speaking any one will say: If I may surround

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myself with appliances whereby I may do a dangerous act with entire safety, it is better that I do so, than depend upon the constant exercise of nerve-racking care. It is better to cross a stream on a bridge than on a log, notwithstanding the latter method requires great caution and the former none. But we must not overlook the important fact that it is not entirely in the interest of human progress that men should be turned into automatons. What consoles me in this regard is, that when we shall have surrounded railway operations with all the safety appliances—automatic and other—which may be invented, such operations will remain so inherently dangerous that care, of the proper kind, will still be in ample demand.

When the admiration which I feel for this great instrument of human progress is considered, and when it is further understood how deep is my shame at its disgraceful record as a destroyer of human life as compared with records of the railways of other countries, it is quite probable that I shall be accused of exaggerating the importance of railway safety and of suggesting impracticable remedies.

Always we are jammed back against the pillar of *cost*. If we could bring about safety, or even greater safety than we now have, would the benefit be commensurate with the cost? Well for the moment I am going to ignore the question

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of cost; and those who are bored by the subject may turn to something more interesting.

Accidents caused by coupling or uncoupling cars

Under the old system, as railroading grew up, the duty of putting cars together to form trains and of detaching cars in breaking up trains, most largely devolved on the class of employees known as brakemen, their labors being supplemented by other trainmen and by switchmen, yardmen, etc. Under the old system, the uniform method of attaching cars together was by link and pin. As these coupling appliances were situated in the middle of the end of the cars, it followed that whenever cars were to be coupled or uncoupled, it was necessary for the employee to go in between the cars, generally in motion, and with his hands adjust the link and pin. This was very dangerous, and the danger was accentuated by the fact that the draw bars of all cars were not at a uniform height from the ground, the difficulty of making the attachment or detachment being thereby increased. In 1893, when the link and pin style of coupling was most largely in vogue, 11,710 employees were killed or injured while engaged in coupling or uncoupling cars.

Inventive genius, ever philanthropic, has long tried to come between the trainman and his dangers. Concerning the coupling and uncoupling of cars it is said: "I will make an appliance by

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which cars will automatically couple when they are jammed together, and be uncoupled by a lever, so that trainmen will not have to go between them." And genius made this invention. Railway managers ever looking at "cost," and ever relying upon their ancient maxim, that no accident could happen if employees obeyed rules, etc., have ever shied at the inventions of genius. Legislators, ever most conservative where wealth is on one side and mere human life on the other, have ever promised, investigated, temporized, compromised and postponed as long as they could do so and hold their jobs. Hence it was not until 1893, when pressure from all sides could no longer be resisted, that congress enacted a law requiring that draw bars should be of uniform height, and that all interstate railways should adopt and use this automatic coupler. The railways were given ample time in which to make the necessary changes in their rolling stock, but it was not until 1900 that it could be said that automatic couplers were in universal use. Before the passage of the law, practically all passenger cars were already equipped with automatic couplers, but only $2\frac{1}{2}$ per cent of locomotives and $16\frac{1}{2}$ per cent of freight cars were so equipped. The effect of this law in the prevention of accidents from coupling and uncoupling cars, as the automatic coupler came more and more into use each year, may be seen in the following table.

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Year	Killed	Injured	Total
1893	433	11,277	11,710
1894	251	7,240	7,491
1895	291	8,137	8,428
1896	229	8,457	8,686
1897	214	6,283	6,497
1898	279	6,988	7,267
1899	260	6,765	7,025
1900	282	5,229	5,511
1901	198	2,768	2,966
1902	167	2,864	3,031
1903	281	3,551	3,832
1904	307	4,019	4,326
1905	230	3,543	3,773
1906	298	3,884	4,182

This table speaks partly for itself, but it speaks with mighty voice when to it you apply the approximate law of railway accidents as above explained. Since 1901, the first full year reported in which the automatic coupler was in universal use on freight trains, the volume of traffic greatly increased and, therefore, notwithstanding its use, accidents from this cause might be expected to increase, as they did. But if the "like conditions" had existed in 1906 as in 1893, the world would have been appalled at the slaughter record of 1906. For from 1893 to 1906 the volume of railway traffic more than doubled. Therefore, had "like conditions" existed in 1906, that is, had coupling been done in that year by link and pin, the number of employees killed and injured "in coupling and uncoupling" in 1906, would have exceeded 23,000 as certainly as railway operations had been carried on!

Now why is it that employees are still killed

and injured, notwithstanding the universal employment of the automatic coupler? Theoretically, a man need never go between the cars when this device is used. Actually, he often has to do so and is crushed. This is in no sense the fault of the coupler. It is not because it is used, but because it is abused. A considerable percentage of couplers are retained in use when they are worn out or are out of order. The same penuriousness which declined their use originally, continues them in use when they should be in the scrap heaps or the repair shop. When men have to go between the cars to operate an out-of-order automatic coupler, it is probably more dangerous than under the old link and pin régime, most likely because the engineer depending upon the automatic coupler working as it should, is less careful in controlling his train. The law should impose heavy penalties for the use of couplers, or, for that matter, any other appliance, when not in good order.

Accidents caused by falling from locomotives or cars when in motion

This is not only one of the most fruitful causes of railway accidents, but one of the most difficult to deal with. Taken in connection with its kindred cause, "*falling* from engines and cars while getting on or off," it was responsible for 973 deaths and 7293 injuries to passengers and

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employees in the year 1906. As a cause of railway accidents it is to be distinguished from "jumping on or off cars etc. while in motion," which will be reviewed later.

Let us first look at the matter as a cause of injury to employees. Under the old system of railroading, before the invention of the air-brake, the speed of trains was controlled by means of hand brakes, which, in the case of box cars, stuck up above the end of the car. At that time the residence of the brakeman when the train was in motion, was most largely on top of the cars, where he was expected at all times, to be able to control the speed of the train by means of the hand brake. This occupation made him quite a sprinting, hurdle jumping, space leaping, brake setting and unsetting athlete. For no time was to be lost. Often he had to go at break-neck speed, jumping from car to car, setting brakes as he ran. And when you remember that this had to be done at night as well as in daylight, with cars often covered with sleet and with *absolutely nothing to protect him from falling except the security of his own feet*, it is not wonderful that thousands were killed or injured every year.

Then came the invention of the air-brake. The home of the trainman was no longer to be on top of the train. The speed of the train was to be under the control of the engineman in his cab: no more falling from moving trains. Blessed

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invention, from which so much was expected, and, so far as the safety of employee is concerned, so little, I fear, realised!

In 1893 congress enacted a law, making it unlawful for any interstate railway after 1898, to use any locomotive "not equipped with a power driving-wheel brake and appliance for operating the train-brake system, or to run any train . . . that has not a *sufficient number of cars in it* so equipped with power or train brakes that the engineer on the locomotive drawing such train can control its speed *without requiring brakemen to use the common hand brake for the purpose.*" Here was a law apparently clear in its purpose to do away entirely with the necessity of hand brakes; hence to do away entirely with the necessity of brakemen going about on the tops of moving trains; hence to do away with "falling" from that cause, at least. At the time of the enactment of this law, about three-fourths of freight engines were equipped as required and less than one-fifth of freight cars, while in the passenger service train brakes were then universally used. The things which this law required were, therefore, not novelties.

There are two ways of judging the effect of a law of this kind. The first is by examining the record of killed and injured since its adoption. Let us first see what this record shows.

Table showing killed and injured by falling

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from locomotives and cars in motion, and percentage of equipment using train brakes 1893-1906.

Year	Killed	Injured	Total	Per cent. of equipment using train brakes.
1893	644	3780	4424	22
1894	439	2869	3308	25
1895	452	3297	3749	27
1896	472	3808	4270	34
1897	408	3627	4035	39
1898	473	3857	4332	47
1899	459	3970	4429	57
1900	529	4425	4954	70
1901	881	4930	5811	73
1902	902	5675	6577	77
1903	1063	6443	7506	81
1904	969	6771	7740	83
1905	906	6439	7345	86
1906	973	7293	8266	90

In the above table the figures represent the total number of all classes of persons—passengers, employees and trespassers—killed and injured. In the table on page 161 the trespassers are not included, which will account for the difference.

Two facts appear prominently from this table: (1), that the percentage of cars on which train brakes were employed increased from 22% in 1893 to 90% in 1906; (2), that the total number of casualties from this cause has nearly doubled in the same time. Applying the law of railway accidents, we should have expected, had the conditions of 1906 been the same as in 1893, that the number of accidents would have at least doubled with the doubling of the volume of traffic. They have nearly doubled notwithstanding the changed condition—the use of the train brake.

Accidents of the kind included in this class have not diminished as they should have done. Why is this so?

Here is an appliance whereby, theoretically, the engineman entirely controls his train, without the necessity of trainmen on the tops of cars using the hand brake. And here is a law imperatively prohibiting the running of any train "that has not a *sufficient number of cars* in it so equipped with power or train brakes that the engineer *on the locomotive* drawing such train can control its speed *without requiring brakemen to use the common hand brake for that purpose.*" Yet notwithstanding the invention, and notwithstanding the law, the accidents which they were intended to prevent have been nearly as common as they were before the invention and before the law. Again I ask: why is this so? And the answers are many.

1.—The law itself afforded the loophole through which the railways could evade it.

2.—The railways have not obeyed the law either in its letter or spirit.

3.—The railways have not been compelled to obey the law.

4.—The railways have used the train brake appliances when they were out of order.

5.—The railways have either not fully instructed their employees how to properly use the train brake, or have employed men inexperienced in

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its use, so that employees have not full confidence in its efficiency.

6.—In order to save employees from falling off cars, other safety appliances must supplement the train brake.

The loophole through which the railways were enabled to evade the law was plain. The law provided that the railways should use "a sufficient number of cars" so equipped as to accomplish the desired end. But it practically left it to the railways to say what number of cars in a train so equipped, would be sufficient. Was it a quarter of the number of the train, half the number, three-fourths the number, or all? This was left to the railways to determine. Now railway men and, I presume, congressmen knew then as they have known ever since, that, *as a safety appliance*, nothing short of the equipment of every car in a train would accomplish the purpose. Indeed it is more dangerous to employees to work a train partly equipped with power brakes, than one wholly equipped with hand brakes. In case of the sudden application of the air to a train partly equipped with power brakes, the unequipped portion is suddenly jammed upon the equipped portion with such force, that a trainman on top of a car must be tied on to keep from being thrown off. The "sufficient-number-of-cars" part of the law practically nullified its useful part. It was the congressional sop thrown to the railways.

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Again it was a question of "cost." And again pressure was brought to bear upon congress, and in 1903 it amended its law by providing that not less than 50% of cars in a train should be equipped with power brakes, and further provided that the Interstate Commerce Commission might increase this minimum. Accordingly in 1905 the minimum number was increased to 75%, and probably by the end of this century, if the railroads *consent* to it, they may be *required* to equip every car in a train in a uniform manner and with power brakes.

Now, look at this matter fairly and squarely. There was not an argument, except the convenience of the railway companies, more potent in 1905 than in 1903 or 1893, requiring all or a fixed percentage of cars, to be power braked. If it was right in 1905, it was equally right in 1903 or in 1893. What then has prevented the making and enforcing of a law on this subject which would accomplish what it pretends to accomplish? What, indeed, except that potent hand which in the end always writes our laws. As for their administration, it bows to the convenience of the railways. As one might say: "When it suits your convenience let us know, and we will make a law requiring you to power-brake 80% of the cars in a train, and so on. However unreasonable you may be, rest assured we will never do anything which will be unreasonable to you."

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But not only has the air-brake as a safety appliance, not had a fair chance before the law; it has not had a fair chance in actual operation. To record all the complaints against its misuse would unnecessarily prolong the subject. As in the case of the automatic coupler, so with the train-brake system, the parsimonious, get-along-with-what-you-have way of doing things has characterized its use. The reports of inspectors are full of instances of the continued use of old, worn out or badly repaired air appliances, or of appliances which have been used so long without examination that they cannot be depended on; of engineers inexperienced, or not sufficiently instructed in the use of power brakes, etc., etc. As usual all accidents are laid to negligence of employees. But the truth is, nine-tenths of the accidents which come from the use of defective appliances, may be laid at the door of railway parsimony.

Still if every train were fully equipped with power brakes, that would not entirely prevent accidents of the character we are now considering. For the time never has been and never will be, when the power brake can entirely supersede the hand brake. The latter must always be relied upon in emergencies, and, of course, there are certain circumstances in which it only can be used. Notwithstanding this obvious fact, the complaint is general that the railways are grad-

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ually allowing hand brakes to fall into bad condition so that many serious accidents result, when employees are called upon to use them. Certainly nothing short of the maintenance of both power and hand brakes in their highest state of efficiency, will answer.

After all is said that may be said in favor of the air-brake as an appliance calculated to prevent accidents to employees caused by falling from cars, it must be admitted that it cannot be depended on to accomplish that desirable end. This is not to say anything against the air-brake as a preventive of accidents from other causes. It must not be forgotten, that we are now considering it entirely as a preventive of accidents caused by falling from cars in motion, and more specifically still, as a preventive of such accidents to employees. Of course if it could fulfill its theoretical function of the absolute control of the train by the engineer, it would be perfection. But the simple truth is it does not do so. Indeed it can scarcely be doubted that it is, in a certain sense, an added source of danger. The sudden application of the air without warning—and often there is no time for warning—is well calculated to knock a man off a car. The most that may be said for it is, that generally it works so well as not to require the employee to be so frequently exposed to danger; but, on the other hand, it probably increases his danger when he is exposed to it. So long as

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men must go on top of moving trains, so long as they must climb up and down the ends and sides of moving cars; just so long will they be killed and injured *unless they have something to hold on to*, something they may catch hold of in case of a misstep or sudden and unexpected jolt.

It is unnecessary for me to say that I am no mechanical technician, but only common sense is necessary to teach one that in a dangerous, dizzy, place, something substantial to hold on to is a good thing to have at hand. This is called up by the fact that, while the compulsory use of the uniform drawbar, the automatic coupler and the train brake, have been of great benefit in preventing accidents of various kinds; there were sundry other safety appliances only secondary in importance, which congress has refused to compel the railways to adopt, notwithstanding it has been frequently urged to do so. Congress did, indeed, compel the railways to put handholds or grab irons in the ends and sides of each car, for "greater security to men in coupling and uncoupling cars"; but why it should have compelled the use of these, and refused to compel the use of sundry other appliances for the greater security of employees, when these were recommended by the highest technical authorities, is beyond my power to comprehend.

Perhaps congress believed that these other appliances would be adopted and kept in good

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order by the railways voluntarily. But the evidence comes to us from all directions that the railways are notoriously neglectful, either in adopting or keeping in good order, any appliances, if there is not a penalty attached to their failure to do so. To set these forth, would be to go further into the details of car construction than I care to go. For the most part they are comparatively inexpensive contrivances; but, you see, if they get out of order, it may be necessary to take the car temporarily out of service. The general principle upon which the railway corporation goes is this: have just as few things as possible about a car that can get out of order, and let the employees take care of themselves.

Injuries to passengers caused by falling from cars

In the year 1906 there were 146 passengers killed and 2044 injured by falling from cars while getting on or off. Bear in mind, that we are not now considering that foolish class of people who jump on and off cars while in motion, but only that class who are injured while, presumably, doing their best to get on and off our passenger cars. Now it is quite likely that the majority of passengers who are injured in this way, are the old, the infirm, and women and children. But it must not be forgotten that it is as much the duty of the railway to provide safety

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for this class as for athletes, and that they need it much more.

Any one who has traveled knows only too well, what it means to climb up and down the steep steps of our cars, when one is often well loaded with the paraphernalia of travel; and especially every one knows the dread of that last and final step into space. Well, the overwhelming majority of accidents to passengers caused by falling from cars, is exactly due to the miserable means which the railway provides for its passengers to get on and off. When, in addition to the inherent difficulty of getting up and down the steps, it is remembered that the landing places are often (generally) poorly lighted, sometimes only by the lantern of an employee; the wonder is that not twenty-two hundred were injured, but that it was not twenty-two thousand. Indeed it cannot be doubted, that thousands every year receive from this cause, minor injuries, while millions suffer serious and unnecessary annoyance and inconvenience. And there is no earthly excuse for all this, except the one of "cost." This may be proven by a simple illustration. If I am not mistaken, the New York City Subway and Elevated carry more than half as many passengers every year as all the rest of the railways of the United States together. Yet as far as my memory serves, there has never been a serious accident caused by a passenger falling while

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getting on or off the cars. Why? Simply because the platform of the car is on a level with the platform of the station. You walk directly from the platform of the station onto the platform of the car and vice versa. Why should not the people who travel by our steam roads have the benefit of this simple safety device? Why, indeed? Simply because it would *cost* the railways something more than it does to pay for killing and injuring people by the present method of handling them, and it would inconvenience the railway in its inspection of cars, etc., at stations.

Would that I might use some prohibited words. Instead, let me ask you this: for what does the railway exist but for the comfort and convenience of the people? It was born to serve them, not to slaughter them. The safety which money can buy is the best investment that can be made. And besides, at present I am, in my feeble way, simply trying to point the way to safety. Later on we will discuss the matter of "cost." Nor do I mean to suggest that car steps as at present used, should be dispensed with. On the contrary they should be retained for emergency use. But if there is any well founded reason why all passenger coaches should not be equipped with the movable platform over the steps, as the best coaches now are, and why passengers should not be allowed to pass directly from the platform onto a station platform and, where necessary,

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descend from it by easy steps, I am unable to imagine what that well founded reason is. Besides, while I am not squandering much sympathy on them, it would at least prevent the fools who try to jump on and off cars while in motion, from tumbling under the cars.

We have now passed over and beyond the boundary of legislative attempts to compel the railways to use means to prevent accidents. For the most part the balance of the page is blank. Nevertheless, there is not the slightest doubt, that there are thousands of people killed and injured every year and millions of property destroyed, which injury and destruction might be prevented, if the railways would voluntarily employ the proper means, or if the legislature would compel their use.

Accidents at highway crossings

Of all the injuries sustained by a long suffering public at the hands of the railway, there are none so absolutely without justification, as those caused by locomotives, trains and cars striking people and vehicles at highway crossings. I say this because there is one absolutely certain and one fairly sure preventive of such accidents, and both are entirely under the control of the railroads, involving merely a question of "cost."

If there is a railway and a highway that cross

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each other at the same level in England, I have never seen the place. Nor would such a thing be tolerated, more than one would be allowed to maintain death traps in a highway. That is the sure prevention of highway crossing accidents—to have the railway go either under or over the highway. Then both could be used without accidents or the fear of them. But, great heavens, think of the “cost”! That is it: allow a railway to increase its liabilities \$31,000,000, merely by writing a resolution for a “stock dividend”; but dream not of compelling it to incur one-third that debt to make every one of its crossings safe! How truly American!

Even on the most miserable road of the most miserable country, of the most miserable people in the civilized world, no railroad crosses a wagon road, save it keep, day and night, a flagman who lowers bars across the highway before any train gets within a mile of it and keeps the bars down until after the train has passed. In the great city of Philadelphia in the United States of America, there are miles of railway tracks over which thousands of vehicles and street cars pass every day, with no protection from destruction except eternal watchfulness. Yes, and in the Imperial City itself, who is there that does not know of the death trap where the railroad crosses Eleventh Avenue? The name of the miserable, poverty-stricken, country, I do not care to men-

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tion, but the name of the other country is known throughout the world for its magnificence, its luxury, its boasting and its multi-millionaire railway magnates.

In 1906 there were 929 people killed and 1892 injured, because the railways were required to protect people on the highways by no better means than the old sign: "Look out for the engine when you hear it whistle." Oh, most generous America, how considerate you are of your people—no your railways! And of these killed and injured at highway crossings, 250 of the killed and 226 of the injured, the railways report as trespassing. Passing the question how a person on the common highway could be a trespasser on railway property, attention is merely called to the excess of trespassers killed over those injured. Obviously the majority were unable to make any report on their own account.

Accidents from being struck by locomotives and cars at places other than highway crossings

Now, here is a record which does us credit, if we are, as a nation, putting up the railway as a death dealing agency. 5563 deaths and 5304 injuries is the record for this cause in 1906! "Surely," you say, "these must have been the trespassers." No, 3656, mostly trainmen and trackmen, and 612 passengers and others, law-

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fully on railroad property, laid down their lives or were mangled. A goodly number of them were injured at stations. And the unpoetic subject, "railway stations" is now my theme.

If you will go to a certain place, not more than a dozen miles from the City of Newark, N. J., you will find a railway station that comes near being a model. There are three parallel tracks, the inner one being for "express trains," which do not stop at this station, and the outer two for "local trains," which do stop. The express track is fenced off from the local tracks by neat but substantial iron fences, in which there are gates for the use of employees. On either side of the local tracks there are comfortable but not obtrusive station houses. If you want to go from one of these stations to the other, you do so by passing through a tunnel under the tracks. I do not know certainly, but I dare say, this station has not the record of a single death or injury to passengers or employees—at least none from being struck by a train. The secret of it all is that no one is permitted, nor will it be found necessary, to cross a railway track. It almost seems that to be killed at that station one would have to commit suicide—almost, but not quite, because the station is defective in just one particular; people may go upon the platform while waiting for their train.

Stations ought to be so arranged and fenced

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and guarded, that no person could cross a railroad track, or come within the station grounds or go upon a platform to take a train, until it has arrived and come to a full stop.

Now, I am well aware that this is interfering with one of the many rights of my fellow citizen. For is it not his right to take care of himself under any and all circumstances? Shall he not be allowed to cross railway tracks if he wants to? Shall he not retain the right to go upon and promenade the station platform while waiting for his train? And has not he done these things since he was a boy without being killed or injured? Yes, certainly, but it is just such acts as these which swell the American record of killed and injured in railway accidents. It is not the thousandth time, but the thousand and first time which catches you. And it is exactly this principle upon which our railways must be operated, if we are to have freedom from accidents. To avoid the thousand and first time which kills, we must avoid the thousand times which do not kill. There is absolutely no other way out of it.

To be sure, railway tracks must be crossed, but they must be crossed by bridges over them or by tunnels under them. To reduce the number of railway accidents—this disgrace to the railway profession in America—we must reduce them all along the line and everywhere. To put railway stations in this condition throughout the country

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"costs." It should be the law that railways should provide the means whereby people may cross their tracks in safety, and then it should be made the law that any one found upon a railway track should be sent to jail.

Nobody was ever struck by a railway engine except upon a railway track, or, at any rate, so near to it that he was poaching on its preserve. Between the rails of a railroad there are, ordinarily, just four feet eight inches and a half, and the balance of the unsafe space does not exceed three feet; yet with all the rest of the world to stand and walk on, some eleven thousand people every year find it necessary to their enjoyment to end their days, or their health, on this narrow strip of land. It is not, as I before intimated, that I am so much worried about these curious people, as I am annoyed that they should be the means of giving my friend such a bad reputation. It is rather to protect his reputation against their assaults that I would make it, as near as possible, impossible for them to get within a destructive distance of him.

But there is another class of people who stand upon an entirely different footing. They are the attendants of my friend. Of necessity they must go upon his tracks and in his yards. It is therefore of the utmost importance, that stations and yards be kept clear of everything which may make more dangerous the inherently dangerous work

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of the railway's servants. As far as possible, these places should be kept free of obstructions of all kinds over which employees may trip or fall. They have about all they can do to attend to their legitimate duties and escape injury, without the added burden of looking out for pitfalls broken drawbars and couplers, exposed ends of ties, switches, pieces of coal and the other things which frequently make our yards and station grounds look like junk shops. All these claim their victims every year, and help to swell the already bloated record of railway accidents.

Accidents caused by collisions

It is ever the unusual, the catastrophic, the cataclysmic, which causes sleepy human nature to take notice. The ceaseless grind of death does not take hold upon the imagination. When a score of lives are blotted out ere one can say it lightens, the world is horrified and, momentarily, remedies are called for. But who is there who thinks that before the sun shall have reached this same meridian to-morrow, and as surely as it will do so, the railways of the United States will have demanded the sacrifice of three hundred and sixty victims; that thirty—not one less—who were happy the moment before, will be corpses, and three hundred and thirty will be writhing upon beds of torture?

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You hear only of the ten or a dozen collisions each year in which there is great loss of life, not of the 6000 which annually occur, with more or less disastrous results, but always with potential destructiveness. Nor do you hear of the thousands more which were just barely prevented by good luck. And all this horrible record could be blotted out and the sheet made clean, if only we would. *It is simply a question of cost.* In 1906 there were 9041 injuries from collisions in the United States. I have not the record of Great Britain for that year, but there have been years in which not a single passenger was killed or seriously injured by collisions in all Great Britain.

I do not need any broader fact than this difference between English and American railways, to teach me at once that collisions are unnecessary, and that to allow the continuance of the conditions which in this country make collisions possible, should cause us to muffle our heads in shame and never again to say anything of the greatness of America until this cloak can be removed.

The causes of collisions

Need I tell you of the causes of collisions? For very shame let me be done with the matter quickly. Butting collisions—that is, clashes between trains running in opposite directions—can never occur on double-tracked roads. An-

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gular collisions—that is, collisions between trains whose tracks cross each other—can never occur except the tracks cross on the same level. Rear-end collisions—that is, where one train runs into the rear of another train—can rarely happen, if well-known appliances are used to keep the trains a fixed distance apart. Now, if you want to know why England has its immunity from collisions, and why they are epidemic in America, you will find the reasons to be exactly as follows: In the United States we depend for the avoidance of collisions upon the *carefulness* of employees. In Great Britain they depend for the avoidance of collisions upon conditions which render them impossible *irrespective* of the *carefulness* of employees.

In Great Britain, all roads are double-tracked. In the United States in 1907, of the 224,382 miles of main track, there were less than 20,000 miles of double track.

In Great Britain, no two roads cross each other on the same grade. In the United States, practically all roads cross each other on the same grade.

In Great Britain, the block system is employed on every mile of road. In the United States, it is employed in but a haphazard way, and its compulsory introduction is resisted by most railway managers and, therefore, congress is silent.

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In short, the American system of depending upon the care of employees to avert collisions is a failure. The British system of rendering collisions impossible is a success. In theory the American system is perfect; in practice it fails. In one thousand cases it works; in the thousand and first case it kills. The prevention of all railway accidents is the elimination of the thousand and first case.

It is not for me, at this late day, to argue about the merit of the block system—automatic or manual. There are three facts which are sufficient for me. (1) Over half the railway world, the block system is the device which has been found best calculated to prevent rear-end collisions. (2) It is used by the most progressive roads in this country. (3) It is used by all railways on specially dangerous parts of their roads. And finally the chief objection which is raised to its universal use, is one of "cost."

Not that I am unaware that horrible rear-end collisions have occurred, in this country at least, where the block system is in use. For neither the block system nor any other system, short of one which ditches his train, can ever prevent an engineer running past a signal, unless by some means that signal is impressed upon his senses. It must reach him else it might as well not be there. So in the end, the efficiency of the block system must depend upon human care. "Then,"

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you say, "that begs the whole question." And, in truth, I admit that it begs a large part of the question, but not the whole question. It is true—literally true—that old, tried engineers run past signals. The reason why the block system is not a perfect preventer of collision accidents, is exactly the same as the reason why the time-interval system is not perfect. It is a question of degree, not of kind. The block system reduces the number of error possibilities close to the minimum; it does not entirely eliminate the possibility of error. But every time you cut off one possibility of error you increase, by a perceptible percentage, the safety of railway operations.

I have said that enginemen run past danger signals. But not only do engineers make mistakes. Train dispatchers, station agents, switchmen, and all other human agencies upon whom the safe operations of trains depend, make mistakes. I have tried to deduce some universal principle governing these mistakes. The task is hopeless. Sometimes errors may be due to the fact that men have been on duty so many hours that their senses are no longer active. But errors are just about as likely to be found where men have just gone on duty fresh from rest. Nor is it often a question of physical disability—of ill-health or failure of vision. Men with first-class sight—perfect color sight—and in robust condi-

tion, make mistakes. Nor is it by any means a question of experience. The worst train wreck I ever knew of, was caused by an engineer of twenty-five years' experience and an almost perfect record, running past a stop signal. Nor is it a question of the use of alcohol. The soberest class of men on the face of this earth are American engineers and trainmen. Not only do they expel a man from their orders who ever shows the slightest evidence of intoxication when on duty, but they are rapidly becoming total abstainers even when off duty. They are the most sensible prohibitionists in the world. Why is it then, that these men, who ordinarily are in perfectly fit condition, make such terrible mistakes? There is but one answer: They err for the same reason that all men err—because to err is human. The human machine is not perfect.

But while I find it impossible to deduce any principle controlling the errors of railway employees, much less to assign any common cause for their blunders, yet I think I can see with comparative clearness one considerable reason for the occurrence of that most fatal of all mistakes—failure to observe a block, danger, or caution signal.

I advance this suggestion with the utmost diffidence, because I am not a practical railway man and must depend most largely for my conclusions upon recorded facts. It is this: The

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multiplicity of duties which devolve upon each employee; the consequence of which is that at a most critical moment the observation of the employee is distracted.

Certainly it is the duty of the engineer to keep his eyes open for signals, but it is also, and primarily, his duty to work his engine. If something goes wrong with it, his attention is riveted upon his engine and an unnoticed signal flies by. Certainly it is the business of the fireman to look out for signals, but it is also his business to keep the machine fed. Likewise it is the duty of the conductor to look out for signals, but it is also his duty to take up tickets and answer all the fool questions that curious passengers may ask. And so it goes, with the result that not infrequently the whole train crew will solemnly swear that no stop or danger signal was showing, whereas in fact it was in plain sight. Under such circumstances, most men say the train crew were simply lying. But that is a mistake. No sane engineer ever yet deliberately ran past a stop signal. Nor would the crew permit him to do so. The simple fact is, that by a concatenation of circumstances, not one of the train force saw the signal. Yet this is one of the most common causes of the six thousand collisions which occur every year on our roads. And they will continue, only in a lessened number, even when the block system is installed on every mile of railway; for, after all, the

block system "blocks," only when its signals are observed.

Now what is the trouble? Obviously, failure to observe signals. What is the remedy? Obviously, to observe signals. But by whom? By the crew of the train, of course. But, you see, notwithstanding the crew should observe the signals, they sometimes fail to do so. You make no advance by this method of reasoning. If this were my own business, it would not take me very long to try a remedy. I would simply say: "Boys, it appears that you can't or don't always observe the signals, and it appears that most commonly this is because you are doing something else. Well, if that is the trouble, we will put one more man on the train whose special business it is to *observe signals and do nothing else*. If he can save me some of these ten millions that were lost last year in smashed up engines and cars, and some of the millions I paid for destroyed freight and damaged passengers, and if he can save some of these nine thousand people whom we killed and injured last year, I reckon he will earn his wages."

As for the station of this man on the train, I can only say that it ought to have three essentials: (1) where he could see; (2) in instant touch with the train control; and (3) where he would certainly be killed if he failed to keep his eyes open.

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Of course all engineers would vote such a man a nuisance. And so will I, when engineers can guarantee me that they will at all times stop their trains before a red signal. But so long as such catastrophies occur as that near Washington, December 30, 1906, wherein forty-three persons were killed and sixty-three injured, because the whole train crew failed to see a red signal in plain sight on a road block-signalled throughout, I shall be inclined to think that there should be some one on a train whose special business it is to look out for signals.

While I am making foolish suggestions, I may as well make another one. There are three kinds of blunders resulting in collisions, which blunders are of a most horrifying character. They are such as are discovered just too late, after they are made, to be corrected, yet which could be corrected if only some means were provided by which a moving train could be communicated with. The first of these is where a train dispatcher, forgetting the fact that he had sent a train from one station, sends out another from the next station, the two trains moving in opposite directions on a single-track road. There is nothing for him to do but go insane, knowing that his blunder will cause these two trains to crash into each other. The second is the case of an engineer running past a stop signal, when the signal man, or some member of the station force, knows the fact yet is unable

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to communicate with the train. The third is the case of the agent or operator who discovers, just after the train has started, that he has delivered the wrong order to the conductor, or made some mistake in the order.

Now it seems to me that a very simple and inexpensive device would be sufficient to correct all such known blunders, thus saving many lives and much property. Suppose that an electric-light wire was strung along the telegraph poles always found close to the railways. At each pole a red-light bulb is attached. These are connected with storage batteries in each station. By simply turning a switch these red lights could be flashed on between the two stations, and the trains brought to a standstill. The device would cost little more than the *wire* of a telegraph line, and the electricity being required only for emergency would amount to but little, provided a storage battery could be used.

Such an appliance would have saved the lives lost in the Washington disaster above referred to. Just as the train ran past his red signal, the signal man wired that fact to Washington. If instead, he had switched on the red lights, the engineer could have not failed to see them and the accident been avoided. Moreover, I should imagine there could be some means devised, by which an engine running on a block track would automatically make the connection necessary to

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light these lights. But about that I am not electrician enough to know. Of course, the whole device is so simple and inexpensive, that there must be some insuperable objection to it or it would have been in general use long ago. For in this case, at any rate, it is not a question of "cost."

Accidents caused by derailments

One-third of all accidents legitimately chargeable to railway *operation*, come from collisions and derailments, of which the latter furnish about twelve per cent. There is no cause of railway accidents about which one may learn so little from the reports, as derailments. Yet we know perfectly well the main causes which give rise to trouble of this kind.

As in the case of collisions, so with derailments, you only hear of those resulting in considerable loss of life. Probably not one person in a thousand knows that there are from 4000 to 6000 derailments every year in this country, or that in 1906, 5218 people were killed or injured, *or that accidents of this kind were more than three times more numerous in 1906 than they were in 1900.*

It would seem that accidents from this cause do not follow the "law of railway accidents," for they have increased out of all proportion to

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the volume of traffic. But this fact, so far from disproving the law, is strongly confirmatory of it. For the conditions which prevailed in 1906, were not the conditions which prevailed in 1900. On the contrary, during that period (and since) the weight of rolling stock and its carrying capacity have enormously increased, without a *corresponding* increase in the strength of roadbed, rails and structures. And this is exactly the change of condition which would be expected to result in this particular class of accidents.

As I remember the law of the destructive effect of equipment and rate of speed upon roadbed, rails and structures, it is this: Destructive action is in proportion to the weight of equipment multiplied by its velocity. That is, a car having a capacity of thirty tons moving at a speed of twenty miles, would have just one-half the destructive effect of a car having a capacity of sixty tons moving at the same speed. The constant tendency is to the use of rolling stock of greater weight and capacity. The figures showing this are available for the years 1902-6 only. The number of cars of thirty tons capacity increased during that period but 19%, while those of forty tons capacity increased 66%, and those of fifty tons over 300%; while we have cars of 100 tons capacity. Now, unless the strength of the bed over which these tremendously heavy trains are rolled, is increased in proportion

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to the increase of weight (the speed remaining constant) of trains; nothing less can be expected than that frequently some part of the bed will give way and derailments follow. For everybody knows how the crust of a highway, or of ice, will be broken through by a heavily loaded wagon, while a light one will pass over it with impunity. This failure of our railways to increase the carrying capacity of rails, roadbed and structures in correspondence with the ever increasing weight of equipment, has doubtless been the main reason why accidents from derailments have increased from 1693 in 1900 to 5218 in 1906.

I mention these facts now, because of their extensive implications. In the first place there has never been any thought on the part of congress, or of any state legislature, that railways should have any standards of construction. Any old thing which consisted of rails laid on the dirt, has been called a railroad and used as such. Always we have depended on railway corporations to do the necessary and proper thing, and in ninety per cent. of the cases what they did was to make the very flimsiest thing which could pass under the name of a railroad. No wonder that we hold the world's record as railway accident producers! In the next place it is obvious, that, with the exception of a few roads, which have constantly kept a standard of construction and maintenance equal to all requirements, our

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entire railway system must sooner or later be overhauled, if we are ever to have safety and adequacy. It is equally obvious that the enormous expense involved in this overhauling, cannot be met out of income. And there I leave this subject for the present, merely remarking that the proper name for derailments is, in the overwhelming majority of cases, simply bad construction or bad material. All this talk about the "breaking of rails," the "spreading of rails" and the "unknown cause" and the "unexplained cause," may be translated into poor material or poor construction. First class roads that are built and maintained *to do the work that is placed upon them*, do not have derailments from these causes. Of course, I am well aware that there are derailments from many other causes, among them the most potent being the carelessness of switchmen. Later we will try to see if there is any way of "legislating" care into a man's head.

Other causes of railway accidents

There are two minor classes of accidents called respectively, "the parting of trains" and "the breaking down of equipment." The causes of these accidents are so obvious that no time need be devoted to them. Most cases of the former kind are directly due to the continuance in use of worn out couplers; most of the latter kind to the

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fact that some one or more of the links which make up the chain called a train is weak; as, for example, where old, worn out cars are placed between new, heavy, cars, when the former suffer from the same trouble that happens to an egg when it is crushed between the two hands. The remedies for these accidents are obvious, and they involve an incident of railroading which will hereafter receive some consideration—the “standardization of equipment.” It is easy to overlook the fact—of prime importance—that from one standpoint, all the railways of this country are but one. For, sooner or later, a freight car may travel over every road; its home is on the track, its destination wherever its freight is to be delivered. Obviously, then, every car should be so standardized as to mate with every other car, and all roadbeds and structures should be capable of carrying any and every car. While this sort of transportation is now being carried on in a makeshift and haphazard sort of way, with the incident of many accidents, a thousand inconveniences and millions of waste; it can never reach perfection until we have a *uniform transportation system*.

Accidents caused by overhead obstructions

It is a curious thing that the builders of railways, knowing that men would be compelled to work

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on top of cars, should deliberately have so planned their overhead structures, that they would of necessity knock men off the cars as the train passed under the structures. Of course it is too late now to remedy the mode of construction, but the railways may at least put up, at a reasonable distance from every such overhead obstruction, something which will indubitably call the trainman's attention to the approach of the obstruction.

Accidents caused by jumping on or off trains, locomotives or cars in motion

Setting aside the 2126 ride-stealers, tramps, hobos and the like who were killed or injured in 1906 by jumping on or off cars in motion, we still have to charge my friend with 7556 casualties from this cause in that year. Of these 1618 were passengers and 5826 were trainmen and other employees.

It does seem a remarkable thing that in this twentieth century, passengers should still be jumping on and off moving trains. Yet it is a rare event to see a train leave a station, when some belated good-bye-sayer does not make a flying leap to the platform, or when some lazy passenger does not swing himself onto the car after it is in motion. Nor is it unusual to see passengers in such a hurry to get killed that they

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jump off the car before it has come to a full stop. Foolhardy as these people are, the railway could very easily *protect itself* against them by the platform scheme heretofore mentioned, or by a rigid rule closing its doors a minute before the train starts and not opening them until the train has come to a full stop. If the aforesaid farewell-taker were compelled to ride a few times to the next station and pay his fare back, it might have a tendency to break him of his fond habit. And if the habitually lazy traveler and the man who wants to get off at each station and survey the country, were compelled to wait for the next train it might teach some of them that the best way to save their legs is not to try to jump on a moving train.

These cases aside, we have left the thousands of employees—mostly trainmen and switchmen—who are annually killed or injured in this way. First we have a considerable number who are hurt by jumping from trains in the hope of avoiding a more certain injury—generally from an approaching collision. For the most part the remainder are injured while performing what is recognized as legitimate train service. Right here is where you will find the railways' defense. There is no rule requiring a trainman in the performance of any of his duties, to jump on or off a moving car, while it is forbidden by the rules of many roads. Yet it would not be far from the

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truth to say that the trainman or switchman who obeyed this rule could not hold his job. The amount of work which the railroad expects to get out of its employees and out of the road, could not be gotten if this rule were lived up to. It is but one of many illustrations which might be given of rules which are made to be violated. The blame falls on the employee if the rule is violated, and he is blamed still more if it is not violated.

Railway employees do not jump on and off moving trains for the mere fun of it, nor because they want to do so, but because they know they cannot perform their duties in the time required unless they jump. Find me a railway that ever discharged or laid off an employee for violating this rule, and I will withdraw my remarks. It is certainly a good rule which prohibits employees from riding on the pilot of road engines, yet the roads know that it is violated every hour of the day. Why, then, are not men disciplined for violating this rule? Simply because the roads expect the rule to be violated. Accidents of this class can never be done away with, until the roads are made to enforce their farcical rules. And this brings me to the final subject of this section.

*Accidents caused by the negligence of employees
or their disobedience of rules*

I began my investigation of the subject of

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railway accidents with the positive conviction that they were primarily and principally due to the negligence of railway employees, and to their failure to live up to the rules made for their guidance in the prevention of accidents. After the examination of practically all the evidence I could find on the subject, I have been forced not only to modify my former conviction but to the deliberate opinion, that the overwhelming majority of accidents are due to the failure and refusal of the railway corporations to provide the best available means of preventing accidents, and to their failure and refusal to provide their employees with the safest available appliances with which to work. I believe that this statement is justified by past history, and by present conditions and that these conditions will project themselves into the future and that the aggregate of railway accidents will become greater and greater every year, subject only to variations caused by varying volumes of traffic.

Railway accidents will recur each year with a precision comparable only to the revolution of our planet, unless and until the conditions which make them possible be changed. These conditions are not primarily dependent upon the care and negligence of employees, which will continue forever as they have been in the past. The conditions are not human. They are mechanical. They are roadbeds, rails, structures, equipments

and appliances. I might almost say, greater safety lies in the direction of *automatic safety*—in the lessening of the quantity of human care required. If it were not that it would weaken the argument I would like to add, that there are those living who will see trains run across this continent with trainmen largely as perfunctory accompaniments. Meantime, keeping ourselves down to earth, it is obvious that we can never have immunity from head-on collisions, until our railways are double tracked; nor from angular collisions and highway crossing accidents, until no road crosses another, or a highway, on the same grade; nor from rear-end collisions, until appliances are used to keep trains a fixed distance apart, with as little intervention of the human element as possible; nor from derailments, until the strength of roadbeds, rails and structures are proportional to the weight of the rolling stock; nor from parting of trains, until worn couplers are discarded; nor from the breaking down of cars, until old and weak cars are deliberately discarded; nor from overhead obstructions, until they are removed or appliances be employed duly impressing upon workmen the approach to such obstruction.

Thus you may begin to understand what is meant by saying that immunity from railway accidents must be brought about by the use of mechanical means, rather than by human means. You cannot expect greatly to inculcate care or

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eradicate negligence by legislation, but you can largely prevent accidents by the use of mechanical means and appliances which do not demand such extraordinary care and which largely render innocuous the negligence and forgetfulness which always have characterized, now do, and always will characterize human action.

From these strong statements it might be inferred that I would not hold railway employees up to the highest degree of excellence. On the contrary I would, both by penalties and by law, hold railway employees to the fullest measure of responsibility, to the strictest obedience to rules which are not made to be violated, and to the strictest discipline. To begin with, however, the reform lies in the hands of the railway companies. Not only does the everlasting slaughter of employees call for continuous renewals, but the complaint is universal, that in times when railway business is excessive, new men are pressed into positions of responsibility for which they are not fitted by experience. The employment of incompetent or inexperienced men is alike unjust to the public and to other employees. Here again the fault lies with the railway corporations. The law should punish with severity, the *responsible railway official* who places in a position of responsibility a man *not known* to be competent to fill it. It is neither a deterrent nor a punishment simply to hold the corporations liable to damages.

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In the next place, it should be made an offense for an employee to violate a rule, *whether or not the violation results in an accident*. And if employees have not the sense to protect themselves by reporting delinquents there is but one remedy—the penalizing of the entire crew. I cannot but feel that there is a growing disposition on the part of the splendid organizations of railway employees, to see the inherent justice of this position. For the protection of their own men, if not for the protection of the public, and the railways, they can neither afford to shield a delinquent, nor to allow other employees to do so. I hope the time will soon come, when every employee will feel it to be his honorable duty fearlessly to report an infraction of a railway regulation, if not to his superior at least to his organization.

Finally, it would be the most remunerative investment that railways could make, to have an organized body of skilled instructors. Experience is, of course, the best instructor but sometimes, if not ordinarily, terribly expensive. This is especially so when new appliances are being introduced. It is more dangerous for an untrained employee to use a new and safer appliance, than an old unsafe one.

The deep-down cause of railway accidents

If we brush aside all “immediate” and “proxi-

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mate" causes of railway accidents, and all "conditions as we find them" and the like surface indications, and get down to the very bottom cause of railway unsafety; we will find it to be about as follows: *We have been trying here in the United States to do railroading in a cheap, rather than in an economical way.* All this talk that we hear about "the conditions being peculiar to a new country," is pure unadulterated rubbish. It is about time we should get over playing the part of "the infant mewling and puking in the nurse's arms," and assume the responsibilities of "a people."

Now, there are two main reasons why we have been trying to do railroading in a cheap rather than in an economical way. The first is a railroad reason, the second a public reason. The railroad reason is this: Our railway managers have subordinated the railway as a physical means of transportation to the railway as a financial operation—they have wanted to make and they have made their money, by dealing, speculating, gambling in, railway securities, rather than out of the legitimate profits which would arise from an investment in a paying enterprise. The public reason is this: The people, utterly disgusted with the financial methods of railway managers, have thought of no way to "get even" with them, except by demanding *cheap rates*. Thus making the railway a stock gamble, and

cheap rates combined, have given us a cheap and murdering railway system. But all the stock gambling which railway managers can indulge in, does not result in the slightest betterment of their roads. They, the managers, may make millions for themselves, but *that* does not add a farthing to the value of the roads. Nor can the conditions necessary for safety (and adequacy) be brought about by the average rates now charged, simply because, all questions as to dividends aside, the rates now charged are not sufficient to raise enough revenue to pay the cost of operating and maintaining the roads and the interest on the investment necessary to make the changes. The simple truth is, the public has been hitting the railways in the wrong place. The blows should have been landed on their financial methods. Or to put it otherwise and very elegantly: you cannot cure the rotten financial disease by starving the patient.

As I write, the voice of suffering touches the sympathetic heart of the whole world, and hands laden with help reach over oceans doing what may be done to relieve the distress of the thousands ruined by the crumbled cities of the Straits of Messina. And well they may; for the telegraph says there are 115,000 victims of this greatest catastrophe of all time. Because the ruin is catastrophic is no reason to undervalue this universal sympathy. I would only that the

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great heart of my people might find a vibrant chord for the suffering of the more than 100,000, who, before this year shall close, will have been victims of our railway folly. For mark you, there is this distinction between the horror of Messina and the deadly grind of our railways: no human power could have stayed the former but the latter is preventable. Nothing stands between its recurrence and its prevention except "cost."

LEGISLATION CONCERNING RAILWAY ADEQUACY

If it were my purpose to write of legislation intended to compel our railway corporations to furnish the country adequate transportation facilities, this section might as well not be written. The page is a blank. Yet whether you consider it from the standpoint of profit to the railways, or from the higher standpoint of the general industrial development of the country, there is no matter of greater importance than adequacy of transportation. It is obvious that if the railways cannot handle all the traffic which is offered to them, they must lose the profit which would have been derived from what they cannot handle. It is equally obvious that if transportation facilities fail to keep pace with industrial growth and development, these must be arrested. Railway safety is, indeed, comparable in importance

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with adequacy, although for another reason. But luckily it so happens that the very changes which will bring railway safety, will also bring railway adequacy.

It was because I believe that the insecurity of our railways has not been brought home to the people, that I wrote the long and tiresome section on that subject. From some cause, those who have written on railway matters, have not considered railway accidents of importance. At least I can come to no other conclusion from an examination of the works which I have been able to get. In two of the greatest standard works, the subject of railway accidents is not even referred to, nor does Professor Ripley give it any place in his admirable collection of *Railway Problems*.

One will find the same lack of consideration of the subject of railway adequacy. It seems to be a matter which does not seriously impress itself upon either the people in general or students. Yet that such lack of railway adequacy exists, admits of no doubt. The fact comes to us from all authoritative sources, and its existence is denied by none. In the early portion of this volume some of the facts were stated. I have since received the 1907 report of the Interstate Commerce Commission, from which, on this subject, the following is quoted.

The whole problem, involving insufficient car and

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track capacity, congested terminals, slow train movement, and other incidents, may be said to be due to the fact that the facilities of the carriers have not kept pace with the commercial growth of the country. One eminent railroad president has estimated that during the period from 1895 to 1905 the traffic offered for carriage in the United States increased 110 per cent., while during the same period the instrumentalities for handling this traffic increased only 20 per cent.

Powers of congress to compel railway adequacy

In 1906 the Interstate Commerce Commission in its report, admitted that it was powerless to afford any relief to the multitude of shippers who had appealed to it for some remedy against the inability of our railways to handle the freight offered them. There was not only no law of congress authorizing the Commission to compel the railways to increase their facilities, but the Commission was also forced to admit that it was unable to recommend to congress any legislation which would meet the case.

Nevertheless, congress is not without authority to enact laws calling upon the railways to increase their transportation facilities. The same authority—to regulate commerce among the several states—which permitted congress to enact the safety appliance law requiring railways to use automatic couplers, airbrakes, etc., is ample to

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enable congress to enact laws regulating, in any and all respects, the physical operations of interstate railways. Congress could enact laws requiring such railways to do any of the following acts: to put in use the block signal system; to use rails of any weight, standard or quality; to make roadbeds, bridges and structures of any strength or material; to make their crossings with one another and with highways so that they would not be on the same grade; to double track their roads; or to do any other act or thing calculated to bring about greater safety or adequacy. Yet on all these subjects congress has been as silent as the Sphinx; and with only minor and unimportant exceptions, the state legislatures have been equally silent.

Why congress has been silent

It is not for me to say why congress has failed to exercise its undoubted authority to enact laws compelling our railways to bring about the greatest attainable safety and efficiency. Yet if one were to speculate on that subject, he would probably conclude that the main cause for this legislative inactivity, is found in our universal faith in the great American principle of legislative non-interference with industrial enterprises. With many a deep drawn sigh, we console ourselves for our cowardice and ignorance, by the blessed

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belief that it is best to leave it to the railways to make these changes at such times as to them may seem most proper. These inexpensive changes like the automatic coupler, congress dared force the the railways to adopt, but when it came to changes involving considerable expenditures, like the block system—which the Commission has been urging on congress for years—action no more pronounced could be expected, than a resolution authorizing an investigation. And if you speak of enactments compelling railways to remove their grade crossings, or double track roads, go into the depths of the forest where your voice will be heard only by your own ears.

Why our railway system has fallen behind the needs of the country

This country affords a particularly good illustration of the dual phase of national industrial growth. There is what may be called the old growth—the fairly constant growth of the portions of the country which have been settled for varying lengths of time. This appears from the continuous growth of manufacturing industries, of industrial cities, and, to a less extent, from the growth of agriculture in the older portions of the country. Then there is what may be called the new growth—the continuous exploration and development of new territory. It is justly expected of transportation that it will grow in correspondence

with these two kinds of industrial growth. In the attempt of our railways to do this, they have been subjected to enormous burdens and strains both physical and financial. The result would appear to be that they have failed in the old kind of growth—in the older portions of the country—in the prime qualities of safety, adequacy and expedition, while their capacity for continuous extension has not kept up with the new growth of the country. If one might venture to throw these failures into figures, the showing would be something as follows. In the matter of safety, our railways are about 90% below absolute safety. That is, there is inherent in railway operation under the best known conditions, about 10% of our present unsafety. By employing these best known means of avoiding accidents, we could reduce them about 90%. In the matter of adequacy, it is alleged by the best authorities that we are about 33% below requirements, though, if it be true that the traffic offered from 1895 to 1905 increased 110% while facilities for handling it increased only 20%, it may be doubted whether the alleged percentage of inadequacy be not too low. In point of expedition in freight movement, I would not like to make a guess as to how far we are behind; but since expedition depends upon safety and adequacy, it may well be estimated that we are 50% slower in freight-movement than we should be. Increased expedi-

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tion can come only with greatly increased and strengthened trackage, and structures, and with additional yards, terminals, etc. Nor can any man tell how many miles of new roads will be required to be built each year; but if we can judge by past experience, not less than 5000 miles of single track alone per annum, will be required for many years to come. For it must not be imagined that this new mileage is required only in the unexplored regions of the United States; there are many of the older parts of the country in need of additional roads. This country will not be adequately supplied with railways, until every inhabitable portion of it is within reasonable reach of the facilities railways afford.

Seeing this ever increasing demand for railways—for better, safer and more adequate old railroads, and for more and ever more and better new railways; I ask you these simple questions: “Is not this a fine country in which to build railways? Do you know of any other country in which there is more traffic offered to railways than they can handle? Do you know of any country which offers such future inducements to the railway? Is there not every incentive in this country to build the best railways? Why, then, have our roads lagged behind the rest of the world in safety, and why have they thus fallen behind the needs of the country in adequacy of facilities?”

From among the multitude of reasons which

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might be given accounting for the condition in which we find our railway systems to-day, there are three of paramount importance.

1.—The uncertain position which our railways occupy in the public eye.

2.—The failure of co-ordination among our transportation systems.

3.—The inherent weakness in the American railway financial scheme.

All these have tended to arrest railway development, to make it inefficient and to make it ignore the public welfare. Let us consider these development-arresting forces.

LEGISLATION CONCERNING RAILWAY RATES

The impressiveness of railway charges

It was mentioned in the last section, that neither railway unsafety nor railway inadequacy, seems to have impressed itself upon people in general, or upon learned writers, or upon the legislators. But a like complaint cannot be made in the matter of the charges which our railways have made for their services. An army of ten thousand might be slaughtered each year and a hundred thousand wounded, the country might be mulcted in extensive, widely distributed, losses, and its industrial development seriously arrested by railway inadequacy, and not excite our special

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wonder; but when we reach into our pockets and fetch out good money with which to pay freights and fares, the matter comes directly home to us.

And it is all so one-sided. There is no back talk about it. We cannot haggle over the price and bargain with the railway about its charges. Unless we are legislators, or politicians, or newspaper men, or preachers, or influential shippers, the railway demands and we pay. Nor is there much credit extended. The railway does business on a cash basis. All this is well calculated to arouse our resentment, and we take it out in anti-rate legislation.

In the matter of complaints against railway charges, there are two peculiarities which seem to me worthy of mention. One is, that it is always the charges which the railway makes *me* for carrying the particular *goods* which *I* make, or in which *I* deal, which I am sure are outrageous. I do not care a fig what the railway charges my neighbors so long as it charges me less. The other is, that it is always the discrimination which the railway shows against my town which makes me mad. I do not care a rap about the discrimination which it shows against other towns. What I demand is that my town shall have the best of it in the way of railway charges. These two peculiarities of human nature, serve to keep up the connection between the present Christian era and a past not too distant.

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And you will see these peculiarities cropping out in a larger way, when you look at the various sections of the country. New England, in the matter of freight rates, is fully as alive to its own interests as is the Northwest, the Southwest or the Pacific Coast. Complaints against railway rates may be said, in a general way, to consist most largely in a scramble on the part of each individual, each town, each community, each state and each section for special privileges.

Absence of definite legislative policy in rate-making

If one were compelled to choose between a bad but fixed legislative policy, and a vacillating, uncertain, policy, one would hardly hesitate to take the former. You can measurably adjust yourself to almost any kind of a fixed policy, but you can only oscillate under a vacillating policy. One who has to spend most of his time dodging bricks, can scarcely be expected to have enough time left to perform his duties. While the people have never had the courage to establish a fixed policy in accordance with which the railways could work, the railways have been compelled to live under the constant menace of vicious legislation, some of which has been realized. Chiefly this has been along the line of the curtailment of railway earnings.

Not that I would have it understood, that it

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should be left to the railways solely to say what their charges should be. Railways are essentially monopolies, and the only limit to the charges which a monopoly will make is the fear that it will lose its position. And this fear is by no means so serious as those who control monopolies would have us believe.

What I complain of is: (1), that there is no legislative power, and therefore no other power, in this government which can conclusively make railway rates; and (2), that there has never been any principle governing legislative rate-making.

Neither can any state, nor any commission of any state, nor congress, nor any commission of congress, definitely and finally legislate as to railway rates. True, they may all make rates to their hearts' content, but unless the rates which they make happen to be reasonable, their labors are null; for whether rates are reasonable, under the law as we have it now, is not a legislative question, but a judicial question, and in every case, a question for the Supreme Court of the United States. Therefore, if the said Supreme Court determines that a legislative-made rate is reasonable, it stands; if it determines that it is not reasonable, it stands not.

But that is not all. The Supreme Court is not an administrative body which sits to make rates. It sits solely to determine whether a particular rate is or is not reasonable. If it determines

that a certain rate is not reasonable, it does not go on and determine what rate would be reasonable. The Supreme Court simply sends the matter back to the legislature to make another guess. But neither the legislatures nor the railways are able to guess what the Supreme Court will guess is a reasonable rate. The result is that the railways are being constantly held up between the devil and the deep sea.

Need I add that this condition introduces inextricable confusion into railroading. No railway knows where it is to come out at the end of a year. Meanwhile the stock gamblers gamble on the forthcoming decision of the Supreme Court. All the railroads know is that they cannot make rates, the legislatures cannot make rates, the congress cannot make rates, the commissions cannot make rates, which will be conclusive. And yet while none of these legislative bodies can make rates which are conclusive, the whole blessed fifty of them can make annual stabs at rate-making. The very sum and limit of American intelligence on the subject of rate-making reaches no further than this: that nine elderly gentlemen in long robes may give it as their opinion, that a certain rate is or is not reasonable.

Since the rates charged provide the only revenue whereby the railways live, it is little wonder that in this uncertainty as to incomes, railway development has been arrested. The wonder is that

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we have been able to build railways at all under such a system.

Is it not rather remarkable that, though we have had the railway with us for upwards of three-quarters of a century, we have been unable to arrive at any more definite or fixed policy as to the charges they may make, than that they shall be such as appeal to a judge on the bench as being reasonable? Is this not rather as though we expect infallibility in a judge? But this aside, if charges are to be reasonable, then they must be reasonable as to something. Shall they be inherently reasonable—shall each charge be reasonable considered as to itself alone? Or shall charges be reasonable as compared to each other? Or shall charges be reasonable as to the capitalization of the railway? Or as to the cost to the railway of performing the service? Or as to the value of the service to the shippers? There is no one of these tests which will stand criticism for a moment nor will they all combined. The simple fact is that there is nothing about a railway charge which has anything to do with reasonableness. *If we are to have railways, charges must be sufficient for their support.*

Railway revenue, rates and classification of services

There are three ideas which are apt to tumble into the mind and, being duly mixed up, land us only in confusion. They are railway revenue,

railway rates and railway classification of services. Railway revenue is the equivalent of railway income. It is the total sum which a railway collects, and out of which it pays its expenses. The phrase "railway rate" is a mere abstraction. It means nothing by itself. It becomes important only when it is attached to a particular thing which is to be carried by the railway a particular distance. And this particular thing may be any one of ten thousand different things which are offered to the railway for carriage.

Now, what is absolutely necessary to a railway is, that it have "revenue" sufficient for its support. How this sufficient revenue is raised is a matter of secondary importance; the all-important thing is that it be raised. But it must be raised by the aggregate of charges made for each item of service rendered. Obviously then the only thing of importance to the railway is, that this aggregate revenue shall be so distributed over the various services it renders that the aggregate shall not be imperiled. Subject to this, the *state* may distribute the specific charges according as its public policy may dictate. And that is all there is, or ever was, in the "reasonableness" of railway rates. It is purely a question of public policy. It could make no particular difference to the railway if it carried everything for nothing, or everything at exactly the same rate per hundred pounds, or some things at one rate and some things at a

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different rate, so long as the aggregate required was made up from some source. And for the same reason it would make no difference whether it charged the same amount to carry the same quantity of the same thing a hundred or a thousand miles. But since there is no one to guarantee the railway that its aggregate of charges will be sufficient for its support, or that any deficit will be made up; it makes a world of difference to it whether the state shall tinker with established schedules, so that the equilibrium of rates be overthrown and the aggregate collections be insufficient for railroad support. For the railways, as the result of years of experience in traffic movements, have classified a large number of the different kinds of freights offered for carriage, so that some of the classes pay very low rates and some of them very high rates; in addition to which classified freights, there is an enormous amount in which each kind of freight is a "class" by itself; and to all these different classes and kinds of freight, rates have been applied which at once *accomplish the double purpose of permitting all kinds of freight to move at prices remunerative to the shipper, and which in the aggregate will support the road.*

The process of rate-making

The process of rate-making, therefore, involves three ideas. First, the segregation of freight into classes or groups. Second, the application

of a rate to each class or kind which shall permit of its movement profitably to the shipper, and the aggregate whereof will support the road. Third, varying aggregate charges for the carriage of the same kind of freight different distances.

It is not my purpose to go into the details of rate-making, nor would any purpose be served by so doing as far as this book is concerned. The all-important thing to be borne in mind is this: in any rational system of rate-making, all else must be subordinated to the necessity that the aggregate of charges support the road. If any other principle than this prevails, you cannot have real railroads though you may have things which, while being called railroads, are in reality nothing but stock-gambling enterprises. It, therefore, behooves our wise legislators, who are always decrying stock gambling, to see to it that they do not increase the evil they deplore by an ill-advised impulse to reduce rates. On the contrary let their zeal be expended in hastening the time when the recognized principle and policy of this country shall be, that railway rates shall at all times be sufficient to pay an honest income on the honest dollars invested in, or required for investment in, American railways.

LEGISLATION CONCERNING RAILWAY COMPETITION

An unco-ordinated railway system

A highly complex mechanism is said to be

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co-ordinated when all its multitudinous parts work in harmony to accomplish a desired end. When such a complex mechanism becomes co-ordinated, it works automatically. The most perfectly co-ordinated mechanisms known are living organisms. So perfect are they that all their functions are performed without the knowledge of the organism. For instance, a living organism is an automatically carried on chemical laboratory, wherein the tests are so infinitely delicate that they defy the knowledge of the most skillful human chemist to repeat them. Also you will see how a part of the organism, instantly adjusts itself to any demand made upon it or upon any of its partners. The nervous system flashes its orders to any or all parts, before we have time to know we think.

As near an approach as possible to this perfectly co-ordinated living mechanism, would I have our transportation system; or, speaking more widely, our distribution system, of which our transportation system is a part. Seeing that the accomplishment of a desired end is attained by the most perfect and harmonious organization, co-operation and co-ordination of all the parts engaged, it cannot but appear remarkable, that the policy of our legislation has been to keep the parts of our transportation system antagonistic to one another—to compel them to pull and haul against one another.

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As against the conception of a combined, co-ordinated transportation system, the people and the legislatures have persistently fostered the conception of competing, unco-ordinated, disjointed individual railways. To competition they looked for cheap rates. To competition they looked for the prevention of railway monopoly. We seem never to have taken into consideration that under destructive railway competition, other abuses might arise even more disastrous in their effects than the high rates which attend unrestrained railway monopoly. Nor have we considered that by blocking the natural and legitimate methods of railway combination, we have but bred an unnatural and bastard method of combination. Much less did we ever consider that we might, by means of legislation, have provided the way for legitimate and proper co-ordinate action among our disjointed railways. As is usually the case, a dominant idea had to run its course. We were, and are yet largely possessed by the idea, that railway competition was and is the cure for all railway ills. And this is true, notwithstanding the most indubitable evidence that lack of railway co-ordination has been and is the main cause of most of our railway ills.

What is railway competition?

Railway competition may be said to exist when

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two or more railways serve the same places, or the same territory, and each offers, or attempts to offer, lower rates or superior service to the travelers and shippers between the two places, or generally within the territory. Every act on the part of the railways which tends to stifle competition among them, is prohibited by the laws of nearly every state and by the laws of congress, and heavy penalties are provided for the violation of these laws. So that it may be said that our railways live under such competition as our legislatures can impose.

Now, what are the chief faults we find with our railways? They are:

- (1) That our railways are not safe.
- (2) That our railways are not adequate or expeditious.
- (3) That they do not give uniform service to all shippers, but do give rebates to some.
- (4) That their rates are unfairly favorable to some places.
- (5) That their rates are unreasonable.
- (6) That they are wasteful alike to themselves, the investors in their capital and to the country.
- (7) That their management enables their trustees to violate their duties, making railroading synonymous with stock gambling.
- (8) That they have corrupted American political life.

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Has competition averted railway faults ?

Will you please ask yourselves of which of these faults have our railways been cured by all our legislation forcing competition? After thinking this carefully over, I cannot but think you will conclude that we have been giving our railroads medicine out of the wrong bottle. Competition has but tended to increase, and in many cases has been the sole cause of, every ill from which our railways suffer. Has it made our railways safer? If so, then why this 90% of unsafety? Has it made them more adequate or expeditious? If so, then, why are our railroads 33% behind the country's requirement? But in the matter of safety and adequacy, the facts are that it is those portions of the country where competition has been the slightest or where railway combination has proceeded furthest in spite of the laws, that safety and adequacy are at their best. Naturally where a road has not been compelled to divide its earnings with other roads, more income can be devoted to improvements and betterments.

But has competition prevented the giving of rebates? On the contrary, competition has been the sole cause and only excuse for the giving of rebates. This is a subject deserving of more consideration. Is it not obvious that if two roads are serving the same party, there can be no open rate competition between them? In order that

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there should be open competition, one road must give a lower rate than the other. The other road must meet this rate or go out of business; for all the traffic will go to the road giving the lower rate as certainly as water will run down-hill. The open, published rates are superseded by secret rates offered each shipper. But secret rates are nothing but rebates. Yet this is the only kind of rate competition which can possibly exist.

Here, then, is the situation. Congress makes it a crime for railways to agree on rates. All rates must be open, published, rates. But all open, published, rates between carriers serving the same patrons must be the same, else the lowest will get all the business. But there is no competition where all carriers serve on the same terms. The only *kind* of competition possible is such as comes from the granting of privileges secretly. Next, congress makes the granting of rebates in any form a crime. Hence congress forces the carriers, if competition is to exist, to commit crimes.

Now suppose that all the railways centering in Chicago were under one ownership—that one railroad corporation had an absolute monopoly of all the rail carrying business to and from that city; can you imagine that that railroad would give, or have the slightest incentive to give, a rebate, or any other sort of special privilege, to any shipper? Can you imagine that the railroads gave rebates to the Standard Oil Co. because

of their love for Mr. Rockefeller? Better by far say, they gave rebates in spite of their hate for him. Railroads give rebates because they know that if they do not their competitors will.

In short, the rebate is the legitimate offspring of railway competition. It has always existed where competition existed *or was even threatened*, and it always will exist, so long as competition exists. New rebate devices will come into being to meet the exigencies of legislation. If what is wanted is a square deal among shippers, you will get it a great deal quicker by a law compelling all carriers to come under a common ownership, than by a law commanding them to remain independent and competitive.

Next, has competition prevented discrimination against cities and localities? On the contrary the only reason any place ever had more favorable railway rates than another place was exactly because it had railway or water competition. At competitive terminals and junction points, railway rates have been low. "There," you say, "competition has been a good thing. There competition has brought about a reduction of charges." Surely it has lowered rates to these points; but that it has been a good thing for the country I deny. On the contrary, I aver that it has been the most damnably iniquitous practice with which our railways can be charged. It has established the practice, now most difficult

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to eradicate, of carrying freight to terminal and competitive points at prices either below or perilously near the actual cost of turning the wheels, while the railway losses thus sustained have been made up by excessive charges to all places which were not competitive points. This has established a system of "place rebates" as cruel and unjust and far more extensive in evil effects, than the system of rebates to individual shippers.

For what do low rates to one town and high rates to another town, either no more distant from or, as frequently happens, 100 to 500 miles nearer the initial point of shipment, mean? Do towns or localities ship goods? No; it is the people or traders of towns that are the shippers. It follows, then, that the people or traders of all non-competitive points, are taxed with high rates in order that people and traders of other towns may have low rates. As railway rates are the most controlling influence upon business to-day, it follows that where these towns are rivals, the people of competitive points are able as effectually to crush out their rivals as the shipper receiving rebates is to crush out a rival who does not receive rebates. And again I ask, does this practice exist because the railways have a greater love for towns where their respective lines happen to meet than they have for towns elsewhere on their lines? And again I answer, a railroad has

neither likes nor dislikes. It knows no more of loves than of hates. It cares no more for one individual than for another. Localities are but points on its lines. It would serve the devil as quickly and as well as the archangel, the Holy City no better than Sodom. Why then these specially favored cities? Why does the railway throw the burden of its profit-making on interior and non-competitive points? Why is every community along its line which is not a junction point and every inhabitant not near a competitive point, mulcted by a high rate to support the people of competitive points? The answer simply is: because inter-railway and water competition have forced the railways to the imposition of rates having these effects. You will never get rid of these wrongs, until the last shred of competition among railways and between rail and water transportation has been banished and you have a transportation system which will not require that nine-tenths of the people of this country be taxed to support the other tenth.

Does railway competition make rates reasonable? The common idea is that low rates are reasonable rates. For the purpose of the argument, let us admit that this is the right idea. How, when and where does competition make low rates? It makes low rates to competitive points; it makes high rates to intermediate points. It does not in the least alter either the average

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or the aggregate of rates. The principle of compensation applies. If railways are to keep out of bankruptcy, these low competitive rates must be compensated for by high non-competitive rates. No railway could live and keep out of bankruptcy, if all its carrying were done as cheaply as it is done to competitive points. But railway systems sometimes are competitors to a greater or less degree throughout the entire range of their operations, or between the great centers furnishing the largest amount of traffic. What happens where rate competition becomes active on this large scale? We have then what are called "cut-rate wars."

And here we may ask the sixth question. Does railway competition on this large scale, diminish the wastefulness which we have seen to characterize our railway system? Does it tend to conserve the interests of investors in railways? Is it of any benefit to the country as doing away with uneconomic railway methods? I need not more than refer to the fact known to every intelligent merchant and manufacturer, that cut-rate wars are utter demoralizers of business. Nor need I more than mention the further fact, known to every student of railway history, that railway bankruptcies in the past have been very largely brought about by the destructive competition to which the railways formerly permitted themselves to be subjected.

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Destructive railway competition has been one of the most potent forces tending to demoralize, if not destroy the values of railway securities. It creates therefore a gamblers' paradise. Instances are not rare, where competitive roads have been projected, or even actually built for no other purpose than to influence speculation; such projects bringing with them another flood of worthless securities, sucking into the maelstrom millions of savings.

The interaction of railway securities upon one another is very considerable. Demoralization in one predominant security is apt to extend to several. For instance, if it were known that the Union Pacific-Southern Pacific system was to have its lines paralleled by a company sufficiently strong financially to carry out such a project, it can scarcely be doubted that something close to a panic would attack the Exchange. Finally it may readily be understood what a figure railway competition, or threatened competition, has cut in the political corruption of the country. Always privileges were to be gotten, or privileges already gotten were to be held against all comers. At once there is an appeal to legislatures, courts, municipal councils—to every place where political power is vested with the authority to give or withhold favors.

Has competition prevented railway monopoly?

If any one can tell of any unqualifiedly good

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thing which has resulted from railway competition, I should like to hear it. Against all the ills it has wrought, there is the claim that it has averted railway monopoly. Even were I ignorant of the facts, I should doubt the capacity of competition to accomplish this end. For, as above said, the railway is in its very nature essentially a monopoly. There is no place in the economy of a country for competitive railways. Either a railway can serve a section of the country or it cannot; and if it cannot it is because it is not a railway. But, this aside, we have but to read the history of railway combinations since the enactment of the most drastic competition-forcing legislation, to learn how utterly unavailing such legislation has been as a preventive of railway consolidations and the establishment of *the* railway monopoly. At the time that these laws were first enacted, the railways were themselves just beginning to realize the fact, that the success of transportation lay in the inauguration of the policy of "live and let live." Before that time the pride of individual railway corporations—the apparent certainty that each felt that it could beat its enemies by the sheer brute ability to stand losses the longest—had rendered approachments among railways difficult if not impossible. Finally intelligence began to be substituted for brute force. The railways formed associations of various kinds, the essential fea-

ture of which was the doing away with mutual throat-cutting.

No sooner did the nation perceive that the railways were "combining to stifle competition," than it swept down upon them with might and main. Of course specially favored competitive points scented trouble, and sent up a mighty howl. This might have been expected, for the very competition which might be stifled was the competition which gave them advantage over other places. But why the whole country—which might have hoped for some relief from the unequal distribution of the railway burden, had the railways raised rates to competitive points—should have joined in the hue and cry, it is difficult to see. However, the whole country took it up. The cry was "Down with railroad pools! Down with all combinations! Down with all agreements in restraint of trade!" And almost, "Down with the right of railway managers to recognize each other on the street."

Then came the anti-pool, anti-trust laws, with which every one is so familiar that it is unnecessary to go into their details. So far as the railways are concerned, this legislation had but one object; to prevent combination among them and to force them to keep up competition. It is only with the operation of these laws in the accomplishment of their purpose, that we are now concerned. Their purpose was to keep railroads at each other's

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throats. The result has been to drive the railroads into each other's arms. I cannot doubt that when congress began its legislating, there was no very great expectation among the railways that the pools would be lived up to. But the legislation effectually accentuated the necessity to be rid of competition. As every one knows, while these laws have been in full force and effect, all the railways have passed under the control of a few systems, which are themselves closely interlocked. As hereinbefore shown, the railways have accomplished this by the simple process of buying up and into each other. And, therefore, it would appear that neither competition, nor competition-forcing legislation, has prevented the railways coming together.

Thus the first step in the evolution of an American Transportation System has about been taken. Our railways have passed from the indefinite to the definite stage—from the unintegrated to the integrated stage. From independent competing roads they have emerged into consolidated roads—from competition to combination. This is not unlike the first step in political integration, when independent warring tribes combine into a more or less compact politico-social unit. Nor is it unlike the combination among the thirteen independent colonies, to form, first the loosely jointed Confederacy and, finally, the United States of America.

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But integration, or aggregation, is but one of the processes in evolution. Unless this process is accompanied by the co-ordinate action of the combining roads, we shall not have accomplished the grand end. We have done away most largely with the fighting, but we have as yet but feeble conjoint action. Indeed there is plenty of evidence that the great railway systems are still thinking a good deal more of themselves, than they are of transportation as a whole. In this respect our great railway men are not disclosing any too much wisdom. It is a great thing to build up the Union Pacific System. It is a great thing to build up the Northern Pacific System, the Pennsylvania System, the Atchison System, the Rock Island System, the Southern System, the New Haven System. But it is a greater thing to build up an American Transportation System.

Meanwhile, all these forces naturally tend to the inevitable establishment of a railroad monopoly. And as a railroad monopoly we must treat it. You have seen how idle it is to throw laws in the way of the natural evolution of a railway system. It seems to me that what we want is not obstructive legislation, but constructive legislation, which will wisely guide these systems during their evolution; so that during the evolution, neither the railways nor the nation will suffer and so that when the process of evolu-

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tion is complete, we shall have a monopoly fully recognizing its responsibility to the people.

THE AMERICAN RAILWAY FINANCIAL SCHEME

Its inherent weakness

If you search for the main reason for the unsafety, the inadequacy, the lack of expedition, the lack of growing capacity of our railway system, you will find it in the inherent weakness of our railway financial scheme. If you search for the main cause of the wasteful methods of our railways, of the losses which our investors in railway securities have sustained, of the abuses of their trust by railway managers, of the enormous losses which the country has sustained from the mismanagement of our railways, of railway bankruptcies and stock gambling, you will find it in the inherent weakness of our railway financial scheme.

And what are the essential features of the scheme by which our railways have been financed? Let me premise an account of them by a brief statement of the financial methods which have generally prevailed elsewhere. In some countries, when a number of people conclude that the time is ripe for the construction of a railway, they organize a company for that purpose, the capital stock of which is fixed at about the amount which careful preliminary estimates show the road will cost.

Subscription to the capital stock is then opened and each of the original promoters subscribe the amount which he thinks he cares, or is able to pay, for, the public being also generally invited to subscribe. These subscriptions are usually payable in instalments as the company requires the money for construction and other purposes. It not infrequently happens that the estimated cost of the enterprise was too low, and that additional capital is required. This additional capital is acquired in several ways, the preferable method being to increase the amount of stock open to subscription. But it may be that additional subscriptions cannot be procured, and that the company is compelled to offer more favorable terms than those which the original subscription carried. The essential feature of this more favorable offer consists in the fact that subscribers are entitled to a fixed return on the shares for which they subscribe, and that this fixed return is payable out of the income of the company before the original subscribers are entitled to any dividends at all. This amounts practically to a pledge of the income of the road in favour of the second class of subscribers. Neither the franchise nor the physical properties of the company is ever encumbered by any lien under this system of financing.

The result of this method is, that while a road may never be able to earn or pay dividends, it

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can never become bankrupt, simply because it owes no debts to those who furnished the money for its construction. Under this system, no subscriber ever gets his stock until it is paid for; or, to state it more definitely, the stock is never fully valid, unless it has paid the full amount of the subscription price as the installments have been called for. There is another essential feature of this financial system. Income is not diverted from stockholders for the purpose of making new and permanent improvements, but the capital required to make these is raised in the same manner as the original capital—by the issuance of stock. Thus the cost of the physical property when completed, is represented by the securities which have been issued.

Now, the American railway financial scheme is about the opposite of that just mentioned. In this country, if a number of persons want to build a railway, they form a corporation with a capital stock about equal to what they expect it will cost to build the road. This capital stock is "subscribed" by the few persons engaged in the enterprise. But they pay in to the treasury of the company only about enough money to make the preliminary surveys, get the franchise and set the enterprise in motion. The next step in their program is to authorize an issue of bonds for about the amount supposed to be necessary to build and equip the road. This is, of course,

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usually about the same amount as the capital stock. The next step is to dispose of the bonds, and thereby raise the capital required to construct the road. There are two ways of doing this. If the organizers of the scheme are men of wealth, they cause to be formed another corporation known as a construction company, composed of themselves or their dummies. Contracts are now made between the railway company and the construction company, by which the construction company agrees to build the road, at such price as the two companies care to agree upon, and it takes its pay in bonds, with or without a bonus of more or less of the stock. The other scheme is to sell the bonds to the public. The essential feature of either scheme is that the road shall be built out of the bonds, or their proceeds, the stock going to the promoters of the enterprise as a clear profit, or as nearly so as it is possible to make it. Thus the road begins its life with a handicap of twice the capitalization, or liabilities, whichever you choose to call it, that it should have had. This is weakness No. 1. It is now launched as a railroad though, generally speaking, it simply consists of ties and rails laid on dirt unballasted and with the flimsiest structures that will hold up a train.

I do not say that all railways of this country were started or made by the above process. On the contrary, it would seem that in the very early

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days of railway building, it was the custom for the subscribers to the capital stock to pay considerable part of their subscription in money, and it is now not uncommon for well established roads to sell their stocks for value when they wish to raise money for new work. What I do say, without fear of contradiction, is, that the overwhelming majority of American railways were started and made in strict accordance with the above process, and that it is still the prevailing custom for the roads to raise capital by mortgaging their physical properties and not by the sale of stock.

The subsequent and successive steps in our railway financial scheme, have been but duplications of the first step, with such variations as ingenuity could conjure up. To raise additional capital, second mortgages followed first mortgages, and even third, fourth and fifth mortgages followed upon the same property. When roads were consolidated they were, of course, covered by their original mortgages, and the consolidated company found it necessary to provide for these so-called underlying bonds, by an additional mortgage covering the consolidating roads. Here was an opportunity not to be missed, and so the "consolidated mortgage" has usually been made for two, three or four times the amount of the underlying bonds. Here was weakness No. 2.

Again, if the roads escaped bankruptcy in the meantime, these bonds had to be refunded as they

became due. This refunding was provided for by what is called a "refunding mortgage," which like its predecessors was usually for an amount greatly in excess of all pre-existing liens, the amount in excess being usable "for the purpose of the corporation." Here was weakness No. 3. I need not follow the successive stages of this process, and show how it has drawn our railways ever nearer and nearer to the pawn shop. It is sufficient to say that with the invention of the holding company, came the issuance of hundreds of millions of debenture bonds, unsecured or secured by collateral—the stocks of other roads. Nor need I more than call attention to how many roads, pushed to extremities, have been forced to "put up" their own unsalable bonds often two for one, to borrow money on "collateral trust" obligations; nor to the hypothecation of equipment nor to the fact that hundreds of millions of dollars of equipment have been bought after exactly the same fashion that the poor buy their furniture—on the installment plan—secured by equipment trust bonds. Nor need I tell you of the many roads that have been forced directly into the pawnshop, to borrow money at high rates of interest on "short term notes" to avert immediate financial disaster. If any more infallible sign of the collapse of the American railway financial scheme be wanted, it will be found in the fact, that after seven years of most unprecedented

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prosperity, now, in a period of universal business depression, our railways find no other way to save themselves except by increasing their rates.

If, now, you will look back over the history of the railways of this country, and see how their path is strewn with railway bankruptcies, will you tell me that there is not something rotten in our American railway financial scheme?

Moreover, here is a new force to be reckoned with. Massachusetts and New York have created real railway commissions. No more railway bonds or stocks can be issued in those states, without the approval of the Commissions, and already in the last year they have refused their approval of upwards of \$100,000,000 of new bonds. This was the last straw. There is no escaping the conclusion that the American railway financial scheme has broken down.

Under such a scheme for the financing of our railway projects, the wonder is not that railways have been poorly built, that securities have been unstable and for the most part a stock gamble, that bankruptcy has one time or another overtaken most of our roads, that accidents have been ever on the increase, that the entire system has gradually but surely fallen behind the requirements of the country; the wonder is that the system so financed was ever built at all.

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The demands on our railway system

And what are the demands which are made upon our railway system, just at the time when it finds itself most helpless? The demands are that our railway system be brought up to the requirements of the country; that this horror of railway accidents shall be banished and this 33% of inadequacy be made good. Where is the money to come from to do these things?

At the close of the year 1907, there were roughly speaking, 225,000 miles of main track railway in the United States. Of these only about 20,000 miles were second-tracked. That would leave 205,000 miles deficient in the element of safety which can be supplied only by providing double tracks. Practically speaking, all the railways of this country cross each other and highways on the same grade. These grade crossings must be eliminated to remove that element of unsafety. As for the block, or some other system to lessen the danger of rear end collisions, it is employed on only a small percentage of our roads. If to these demands upon our railways, you add the universal necessity for the increase of yard and terminal facilities, and the fact that our new railway mileage must continue to grow every year for many years, at the rate of about 5000 miles; you will get some idea of the physical and financial demands that are pressing upon our railway system to-day.

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I doubt if there be any one who would estimate that the total changes necessary in order to bring about the highest degree of safety, adequacy and expedition over these 205,000 miles of road, would require less than an expenditure of \$25,000 per mile. That would call for \$5,125,000,000. In addition to this, the yearly railway growth will call for from \$300,000,000 to \$500,000,000 per annum, if these new roads are to be built as they should be built, and not in the slipshod manner which has characterized past construction. We may as well look this situation squarely in the face; there is no use in dodging it.

Is it reasonable to suppose that our railways can, under existing conditions and by the same financial scheme which they have employed in the past, raise the money necessary to bring about these changes and continue railway growth? This scheme has led straight to bankruptcy in the past. Is there any reason to suppose it will not do so in the future? What are the conditions to-day? Is there any better known fact, than that tens of thousands of miles of our railways have been hanging in the balance during the past year, and that bankruptcy has been averted solely by reason of their application to the pawn shop? Is it not perfectly understood that these roads to save themselves from immediate ruin, have had, practically, to place themselves in the hands of their enemies?

But this is not all. Say that this condition applies to only a small minority of our roads. What of the so-called strong roads? Are not they as well as the weak roads already plastered over with every conceivable and some inconceivable and unmentionable forms of debt? Have not they, too, borrowed in every way and by every device which ingenuity can invent? And borrowed, too, not solely for legitimate railway purposes, but for utterly illegitimate railway purposes, as to invest in outside industries, not to mention the borrowing of money with which to speculate in Wall Street!

But this is not all, either. The American people are not to be made fools of forever and forever. Not only has the borrowing capacity of the railways greatly diminished, but their legal capacity to borrow is being rapidly curtailed. The state and national governments will not forever sit supinely by and see the people loaded, year after year, with this railway debt, "to repudiate which is a national dishonor"; and at the same time see the people perennially robbed by the rottenness of securities put upon the markets. Already, as pointed out above, New York and Massachusetts require the approval of all bond and stock issues by their commissions, and it would not be at all surprising if congress would soon become sufficiently awakened to such a sense of its duty, as to require all interstate roads to have their

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bond and stock issues approved by the Interstate Commerce Commission.

Thus a perfectly legitimate and wise law, would at once have the effect to enormously curtail, if not destroy, the borrowing capacity of the roads. For mark this, it has been only by virtue of the capacity of the railways to issue and sell securities of doubtful value in most uneconomical ways, that they have been able to get along at all. Looked at broadly, there is no hope that our railway system, laboring under its inherently weak and well-nigh exhausted financial scheme, will be able to come to the relief of the country, by providing it with safe, adequate and expeditious transportation facilities. On the contrary what may be legitimately expected is, that it will each year fall a little more behind in these requirements, and that the bankruptcies of the past will repeat themselves.

Two things must change. The attitude of the railway toward the people must change. It must be made worthy of the confidence of the people. In order to accomplish this, the financial scheme of the railway must change—it must become honest.

The principal railway problem in the United States is a financial problem. That being settled, all other problems will settle themselves, or be settled easily along with the settlement of the principal problem. The old financial railway

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system of issuing bonds to build roads, and of issuing stocks without an equivalent of value going into the railway treasury, must cease. The old system of borrowing money by every conceivable scheme, and the foisting on the public of this malodorous polyglot of railway securities must cease. And this old system must be replaced by a new one, the fundamental conception of which is, that there shall be but one uniform security, which shall have the right to earn a fixed dividend, and that every dollar of value that this security purports to have, shall be represented by a dollar paid into the treasury of the company. Under this system there will be no difficulty in finding all the money required to bring our transportation system up to a civilized degree of safety, with adequacy and capacity of growth sufficient for the needs of the country. But the new system cannot be adopted until the old system is blotted out. To devise a plan whereby the old system may be blotted out and the new one installed without injustice to any one, is a first class undertaking.

A MAN I MET—AN INTERLUDE

In my wanderings I met a man possessed of just plain common sense. He was something of a traveler, and I found him well acquainted with the geography of this country. He knew its

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coasts, harbors, lakes, rivers, mountains, great cities, its innumerable towns and villages. He had familiarized himself with the industries of the country, its agriculture and manufactures. He was so much better acquainted with facts of history and social conditions, past and present, over the world than I, that he made me quite ashamed of my ignorance. But he was most unfortunate in one respect. Apparently he had never heard of the Constitution of the United States, and knew nothing of the political division of the country into states. I am quite sure that this was so, not because he had never known these important facts, but that he had suffered one of those wonderful lapses of memory such as cause a man to forget his own name while remembering perfectly every thing else.

I regret to say that in talking with my new acquaintance, I had very little opportunity to gratify my desire to exploit the greatness of my native land, for no sooner would I mention some extraordinary feature, than I found he knew more about it than I and was even louder in his praises. For instance, one day I started in to tell him about the magnitude of our railway interests, but before I got fairly launched he broke in on me with exclamations of delight. "Wonderful!" he exclaimed, "Marvelous! You have more railway mileage than all Europe: nearly as much as all the rest of the world. And yet your transportation system is

only in its youth. It is n't half grown yet."

"I think we have done pretty well," I said, being a little hurt by the talk about youth.

"Done well? Well, I should say you have done well—almost too well. Yes, it would have been better if you had gone a little slower. But it is the way with you Americans. You never put off till to-morrow what you can do by working all night. With your mighty energy you feel that you can hurl a bridge across a great river by main force. You go around curves, through cañons, up mountains, in a way to make one's head swim. Do you know," he said, suddenly breaking off in a way he had, "that you Americans, with all your boasting, have no appreciation of the greatness of your country and its wonderful potentialities." He said that last word with such measurements between the syllables as made it sound a minute long. And then I listened to such another tale of grandeur as would make me blush to tell it. His concluding words were, "When your transportation system is complete you will be the masters of the commerce of the world." I caught my breath sharp at this, for I had already been a good deal moved by his laudation of my country.

Then he stood with folded arms, like a man on a high mountain scanning the whole horizon. "Asia on one ocean and all the rest of the world on the other! And God, what productive power!"

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he said. "Look at it reaching from ocean to ocean: all the products of the earth to fill the wants of man. Only distribution to the world is wanted. And see your transportation system, how it is welding into an harmonious, working entity! But a few years ago it was only disjointed scraps. Now it is organizing. Presently it will be organized—river, lake, coast and railway, each fulfilling the functions it serves best; all working together to a common end. When your home organization is complete it will be extended to the sea. Then you will be masters of the commerce of the world, holding both production and distribution at your command."

This was none too easy for me to digest. After waiting a reasonable time, I asked him if he would tell me what he meant by a "distribution entity" or whatever he called it. He said: "What I am trying to impress upon you is, that all the transportation facilities of a country ought to work in harmony; there ought to be no conflict between them. If your products can be more economically carried by water than by rail, it is silly to carry them by rail at a loss in order to kill water carriage. Both must, therefore, be under a common control, in order that each may do that which it can best do, and the country be best served."

"Do you mean to say that you would unite the transportation facilities of the country—land and water—under one control?"

"Undoubtedly. Why not? Can they serve the country better by mutually destroying each other? Must the hands quarrel with the feet because they serve best for walking?"

"And you would combine all the railroads in the United States into one corporation?"

"Of course. You will never get the best results out of your system until you are able to treat it, and have it work as, a whole."

"Why, you would have a corporation greater than any in the whole world. It could subvert the government," I said.

"My dear sir," he said, "do you not know that that is exactly what you are coming to? You are going soon to have a corporation so much larger than any now in the world, that it will compare to others as one of your sky scrapers does to a hovel. As for it subverting the government, that is as you like it. If you let it do so, it will. If you care to prevent it, you can."

"How?" I demanded; for the idea of a corporation controlling the government was hideous. He was now so very calm that I thought he was scarcely interested, being wholly taken up with the contemplation of the magnitude of the enterprise. But I soon found that he was more interested in this phase of the subject than the other.

"The capacity of a corporation to work ill does not depend upon its size. The capacity of a

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corporation to juggle with its finances, to over-capitalize, to issue fictitious stock, and the like, and to demand monopolistic prices for what it does when it has every thing its own way, determines its power for working ill. Control the finances of a corporation and you draw its fangs. If it insists on being a hog, treat it as such. If it has what you have to have, and by reason of your necessities charges you more than it is worth, take the matter into your own hands. Let the state take its profits till they are fair. There is absolutely no other way to treat a commercial hog."

"Yes," I said, rather disappointed that he had not something more novel to offer, "it is easy enough to speak of controlling the finances of a corporation, but rather hard to do. For instance, you know there is a great question to-day about the over-capitalization of our railroads and——"

"Oh, yes"; he broke in, "I know all about that for the best of reasons. That question must be settled sooner or later and the longer you put it off the more difficult it will be to take it up and get it settled. So it ought to be settled at once."

"Yes, but how?" I asked.

"Like any other question," he said, quite as calmly as though he were talking about any ordinary affair. "Leave it to an impartial court. If it is found that some of the stock is illegal, shear it off from the liabilities of the companies like any

other unlawful issue. The trouble about people is that they are always stunned by what is immense. They cannot apply the same principles to a great as to a small thing. What is illegal is illegal no matter whether it involves dollars or millions. Then call in all these multifarious bonds, debentures, stocks and securities, and issue in their place a simple uniform kind of security on a basis of 5% dividends. Give the court authority to make rates of freight and fares just enough to raise money for the necessary expenses and to pay dividends, and as you want to build new roads or improve old ones, issue more stock just like the other, drawing 5%. You need n't have any fear of the public refusing to buy it, for it will be as good as United States bonds."

"Why, that would be government ownership," I said.

"Government ownership! Not by any manner of means. I don't go a thing on government ownership. It would be government control. The government would not own a share of the stock, nor be liable for a dollar of the liabilities of the company. The stock would be owned by the public, just as it is now."

"But it would surely concentrate great power in the hands of the government?"

"Quite to the contrary. It would deprive your president and congress of about two-thirds of their capacity for interference in private affairs.

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They would have nothing to do but constitute the court. After the court settled the question of how much the system is worth, and created the new corporation and issued the new stock, about all it would have to do would be to fix the rates, say once a year, by a degree; and, if any new road was to be built, see that the bids for construction were all right. Everything about the actual operation of the road would be left to its board of directors, elected by its stockholders. You see there would be no chance for rebates, or discriminations of any kind, because everybody would have to come to the company, and, of course, all rates would be on equal terms for the same distances under a proper classification of commodities according to their values."

"Well," I said, "you certainly have disposed of the whole question pretty effectually. But you have overlooked one thing. Your transportation system could not exist under the federal constitution."

"The federal constitution?" he said in a dreamy sort of way as though he was racking his memory for something. "What is the federal constitution?"

"It is a wise body of laws framed by the fathers of our country to form a more perfect union, establish justice, insure domestic tranquillity, provide for the common defense, promote the general welfare and secure the blessings of liberty?"

"It certainly had most excellent purposes in view. When did the fathers frame it?" he asked.

"About one hundred and twenty-five years ago."

"Why, goodness me!" he said, "that was before the discovery of the steam engine. There was n't a railroad or steamboat in the world at that time. You do not mean to tell me that the fathers were wise enough to legislate on a subject about which they had never even dreamed?"

"No, not exactly that. But they knew well there would be commerce in this country, and they provided that the general government should regulate commerce between the states and that the states should regulate commerce within their limits."

"The states?" he asked, "what are they?"

"There are imaginary lines running through the country dividing it up into states."

"And do you mean to tell me that if a railroad train starts just on one side of one of these imaginary lines and goes over it just an inch, it is commerce under the control of the general government, and if it starts just inside of the line and goes a few feet, it is commerce under the control of the states?"

"That is about it," I replied, a little nettled at the way he put the question.

"And you have never changed that?"

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"No," I answered.

He burst into loud peals of laughter. I can hear him yet. He kept laughing so long that I got indignant. Finally, seeing that I was much hurt at his levity, he said half apologetically: "What was it you say they made the constitution for? 'To form a more perfect union, establish justice, insure domestic tranquillity, promote the general welfare'—and they left the railroads in this disjointed, disorganized—but, of course, they never thought of such a transportation system as you have. How the old fellows must be laughing at you! And I have always understood that you Americans were the most intelligent, adaptable and practical people."

He vanished leaving me a little crestfallen and wondering whether there was any basis for his mirth. Suddenly he reappeared as quickly as he left.

"By the way," he said, "did the fathers provide for a postal system?"

"Yes," I answered.

"And did they provide that the general government should carry the mail between the states and that the states should carry it within their boundaries?"

I explained it to him.

"Well," he said, "I guess the old gentlemen knew what they were about; but they were naturally a little hazy on the railroad question. Have

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you got a copy of this constitution handy?"

I gave him one and watched him while he carefully read it through. When he had finished, his old enthusiasm for everything American returned.

"Wonderful! Wonderful!" he exclaimed. "It is the wisest document ever framed for the government of human kind. See how it restricted the central power! There is no chance for a Cæsar here. See how the states were left as independent communities to develop without any imperial whip over their domestic affairs. And yet how plain it is that everything pertaining to the general welfare was yielded to the national government. Do you think it possible if they could have foreseen the tremendous development of your railway system that they should have provided for national control of post-roads and left the transportation system in this chaotic condition? Is there a shadow of doubt that under the authority of the federal government to make post-roads it could have built a great system of highways throughout the whole country and that every foot of it in every state would have been subject to federal control? My good friend, if the wise old fathers were here to-day instead of their foolish sons, they would add just a few words to that celebrated constitution. That sentence would read, "*To regulate commerce among the several states and transportation throughout the United States.*"

PART III
A SUGGESTED CONSTITUTIONAL AMEND-
MENT

*Various aspects of the constitution of the United
States*

WHEN the people of the United States had ordained and established their constitution, the government thus formed presented various aspects. To all the rest of the world it was a nation, with which alone all foreign powers could deal. In this national aspect it was endowed with all the authority of any sovereignty. It alone could enter into treaties, the states being expressly prohibited from doing so. It alone had power to raise and support armies, to provide and maintain navies, to declare war and conclude peace. It alone had power to regulate commerce with foreign nations, to impose duties on imports, to define and punish piracies and felonies committed on the high seas and offenses against the laws of nations; to admit emigrants and to provide for their naturalization. Thus whether in peace or in war, as to all the rest of the world, the people

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were a nation. In this external aspect of the government there were no states. It was precisely as though there had never been any states.

In another aspect the people were a nation though this aspect had nothing to do with the affairs external to the country but solely with its domestic affairs. The nation reserved the power to coin money, to fix the standard of weights and measures, to grant copyrights and patents, to make a national bankruptcy law, and to establish post-offices and post-roads. In these aspects the people were as completely national as though no state lines had ever existed.

There was another aspect of nationality, in which the people as a nation, was an undisputed sovereign, yet in which the nation recognized the existence of other sovereignties within its boundaries. The nation had sole power to govern all territory belonging to it, to admit new states and *to regulate commerce among the several states*.

Thus we see, that in their external relations the people were a nation knowing nothing of states; in certain of their internal relations they were a nation knowing no states; and in certain other internal relations, while yet a nation with absolute and sole power, there was a recognition of other governments. To carry out these aspects of nationality, the nation was given full power to make all needful laws. To provide itself a revenue it had the power to borrow money and to tax its citizens

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To confirm and make more indisputable these aspects of nationality, the people prohibited the states from entering into any treaty, alliance or confederation; from making any agreement, or compact among themselves, or with any foreign power; from engaging in war, unless actually invaded, or in such imminent danger as not to admit of delay; from coining money, emitting bills of credit, or making anything but gold and silver coin a tender in payment of debts; from laying any imposts or duties on imports, or exports, or of tonnage; or from keeping troops or ships of war in time of peace.

There was another most remarkable aspect of nationality presented by the people in prohibiting the nation from doing certain things. The nation could not take from the people those rights and liberties obtained by the struggle of centuries—freedom of religion, of speech, of the press, of peaceable assembly, of petition, of the right to bear arms, of security in their persons, houses, and papers, of trial by jury. Even the nation could not deprive any one of life, liberty or property without due process of law, nor could private property be taken for public use without just compensation. Finally, and of great importance, the nation could not lay any tax or duty on articles exported from any state. These were in the nature of limitations, which the nation imposed upon the exercise of sovereign power by itself.

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Next we may observe the aspect which the nation bore to all the states, as states. It guaranteed to every state a republican form of government, and to protect each of them against invasion or domestic violence. The nation provided that its taxing power should be uniform: "All duties, imposts and excises shall be uniform throughout the United States": "direct taxes shall be apportioned among the several states . . . according to their respective numbers" (of inhabitants). "No capitation or other direct tax shall be laid, unless in proportion to the census," etc. Likewise, it was provided that no preference should be given to the ports of one state over those of another. Thus the nation stood as the equal guardian of all its children, agreeing to impose burdens uniformly.

The original framers of the constitution thought that, except where acts might trench upon the authority of the nation as a nation, the states could be fully trusted to make their own laws. It stood in a distinct attitude of prohibition to the states, only (in addition to the respects above mentioned) in denying them the power to pass any laws which should work corruption of blood, or which should make an act a crime which was not a crime before the law was passed, or which impaired the obligation of contracts, or which granted any title of nobility.

The constitution presented still another aspect:

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—the relation of the states to one another. Each was to have full faith and credit in the public acts, records and judicial proceedings of every other state; fugitives from justice should be given up; the citizens of each state should be entitled to all privileges and immunities of citizens in the several states; controversies between two or more states or between the citizens of different states should be decided by the national tribunal; vessels bound to or from one state should not be obliged to enter, clear or pay duties to another.

Such, in brief, are the aspects which the people as a nation present to the outside world, which the nation presents to its states and the states to one another. Every governmental power not given to the nation or prohibited to the states was reserved to the states or to the people.

It will be surprising to many, who may not in these recent years have thought on the subject, to know how completely and entirely the nation trusted the states. It practically left them sovereign in everything, except that they could have no foreign relations, *nor could they do anything which interfered with absolute free trade among themselves.* The nation imposed much more stringent prohibitions on itself against the exercise of possible arbitrary power, than it imposed on the states. All those prohibitions against interference with freedom of religion, of speech, the press, etc., were prohibitions on

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the nation's powers of legislation. The states were left free to legislate on such subjects as they might think best. The field of the national government was thus originally quite narrow, though very important; that of the states very wide and also very important. Secured in their domestic peace and against foreign attack by the mighty arm of the nation, the people of the states were left free to develop, as independent and liberty-loving communities might, all their domestic relations, their family relations, their educational ideas, their business, corporations, highways—all that concerns the growth and development of communities under the blessings of peace and liberty were left to them. The nation did not doubt either the capacity or justice of the states in dealing with all their domestic affairs.

For ninety years this constitution served. It was satisfactory to all the people in all respects, except one. At the time of the establishment of the constitution slavery existed in all the states but one. It being a purely domestic institution, the nation had nothing to do with it. It was left to the states to deal with as they severally might think best. But from the very beginning there was one party or class of the people which sought to make slavery a national question, and another party which sought to maintain it as a purely state question.¹ *This was practically*

¹ Perhaps this statement lacks exactness. On the one

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the only discord which ever existed among the American people; but it branched in sundry directions. It divided the people into two parties of extremists, one exalting beyond its due bounds the idea of nationality, and the other carrying the doctrine of state sovereignty to the right of a state to secede from the nation. The question was settled by the heroic struggle. With its settlement naturally the exalted idea of nationality bore fruits. It is only with those fruits we are now concerned.

The constitutional equilibrium destroyed by the "Fourteenth Amendment"

The Fourteenth Amendment to the constitution completely disorganized it, so far as the relations between the nation and the states were concerned. The constitution, as adopted originally, expressed the most complete trust in the capacity, wisdom and justice which the people of the several states might show in legislation concerning their domestic affairs. The Fourteenth Amendment substituted for this trust, an entire distrust in the capacity, wisdom or justice which the people of

hand, it was never contended by the slave-holding portion of the country, that it was beyond the power of a state to prohibit slavery within it; but, on the other hand, it was contended that slaves escaping into a free state, or temporarily accompanying their master into a free state, were not, by such acts, freed. Likewise, that congress should not, and, perhaps, could not, prohibit slavery in the public territory.

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the states might be expected to show in their domestic legislation. Primarily intended as a protection to the recently liberated negroes, the Fourteenth Amendment was so broad as practically to make subject to review any legislative act and judicial decision of state authorities.

I do not say that the Fourteenth Amendment required the states to surrender any power which a free government should ever employ. Its important provisions, that no "state should deprive any person of life, liberty or property without due process of law, nor deny to any person within its jurisdiction the equal protection of the laws," were fundamental principles of American life, policy and state constitutional law. Except as they were affected by the existence of slavery, I have no doubt that at the time of the adoption of this amendment, just such provisions were to be found in the constitution of every state. The amendment could have served all useful purposes by confining its operation to the liberated slaves. Primarily intended as a stroke at the Southern States, the blow destroyed state government throughout the nation. It practically declared that the states were incapable of administering justice to their people in their domestic affairs—that neither their legislatures nor their courts could be trusted. It was the deadliest blow ever aimed at the capacity of the people to govern themselves.

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By what legerdmain of reason or white heat of passion, the people could have been led to believe that there was more virtue, probity, wisdom and justice in a federal judge, than in the whole people of a state and in their state tribunals, is beyond comprehension. For note it well, this amendment not only denied to the people of the states the power to conclusively legislate, concerning their domestic affairs, but it changed the government of the country from governments by the people to governments by the federal courts. Every person and corporation, under pretense that state laws and regulations deprive them of property without due process of law, rushed to the federal courts. Even though these corporations owe their very existence to the state law,—their very right to do business at all,—they snap their fingers at state control and at state tribunals, and seek the hovering wing of a federal judge. Especially is this true of all corporations operating public utilities. Gas companies, electric companies, elevator companies, street railway companies, steam railway companies, organized and existing under the laws of a state, collecting the very tolls by which they live from the people of the state, are yet not subject to the control of the state, nor of its courts, if that control meets not the approval of a federal judge. If rates fixed by the highest state authorities are not such as in the opinion of a

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federal judge are just and reasonable, they are set aside.

The Fourteenth Amendment a mere negation

But that is not all. The Fourteenth Amendment is a mere *negation*. It simply gives the court the power to say, Thou shalt not. It confers upon no legislative body and no court the power to say what shall be. It merely suspends the power of the state. It takes the power from the state, but does not confer it upon the nation. Had the people in their collective wisdom seen fit to extend the legislative authority of the nation to other fields than those originally conferred upon it, the amendment would not have been so bad. If, for instance, in addition to giving congress the power to pass laws of bankruptcy which it originally possessed, it had extended its power to the fixing of the rates to be charged by public utility corporations, we would at least have known where to look for legislative action. But the amendment did not extend the powers of congress in the respects in which the federal courts have intervened. The courts themselves have decided that it is not their province to enter upon the administrative task of framing a tariff of rates: their jurisdiction begins and ends with the declaration of the individual judge, that the particular schedule is or is not reasonable.

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The net result is that we have a huge legislative vacuum. The Fourteenth Amendment takes the power from the states, but does not confer it upon the nation.

The weak spot in our scheme of government

It was the claim of the makers of our national constitution, that in the totality of our government there could be no such thing as a governmental hiatus. All governmental authority not vested in the nation, was reserved to the states or to the people. Surely this filled the entire scope and range of sovereignty. Moreover it was claimed that the respective powers of the national and state governments were so clearly defined, that there could never be any interference between them. Within its own sphere the national authority was supreme. Within its own sphere the state authority was supreme. In theory the scheme was perfect. But has it been so perfect in its practical operation?

I suppose I was born with a lack of reverence for things which most people idolize most largely, because they were raised under them and because these things have existed for a long time. At any rate, I must confess that my admiration for our national constitution is tempered by certain facts. I am compelled to confess a lack of admiration for a document so loosely drawn, that its most import-

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ant principle admitted of diametrically opposite interpretations by millions of equally learned and honest people—people whose earnestness of interpretation was attested by their life's blood. Nor is my admiration heightened by the fact, that, after one hundred and twenty odd years of judicial interpretations, the mystery of much of the constitution is as yet unsolved.

But it is not merely in the matter of the interpretation of the constitution that my admiration is lacking. In some of its essential features there is just cause for complaint. There is no other power on earth to-day that may not make a binding treaty with other powers. But with us, all other powers must take notice that the treaties we make may be unconstitutional and therefore void. Nor is this all. Our national government may make treaties which a state may nullify. Because if the treaties intrench upon the reserved authority of the states, they are to that extent unconstitutional. As witness the treaty with Japan, which the state of California has the undoubted right to nullify, because all questions relative to education and land ownership are state and not federal questions. Truly, all this may be answered by simply saying that our treaty makers must make constitutional treaties. But in the meantime it is very embarrassing to acknowledge that our nation has entered into an international contract which it cannot fulfill.

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Conflict of laws under our governmental scheme

Just as slavery was the only cause of dispute between the American people, so the constitutional relationships between the federal government and the states and between the states, raise the only serious question in the governmental affairs of this country. Let me give you a practical illustration of this in a matter which has just this moment fallen under my eye.

The law of the state of Massachusetts is that no railroad doing business in that state can increase its bonded or stock indebtedness or consolidate with any other roads, without the approval of the railroad commission of that state. Now, the New York, New Haven and Hartford Railroad Company is a rather vigorous railway corporation, owning and controlling a railway running from the wicked city of New York to the holy city of Boston, and hence in the course of its meanderings traversing the states of New York, Connecticut, Rhode Island, and a part of Massachusetts. Incidentally it may be remarked, that this railway company threatened to give to New England the best railroad system in America and may do so yet, notwithstanding the combined opposition of the United States and New England. The corporation, as at present constituted, is a consolidation of so many little roads that one would have to be a sort of railway gazette to remember

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all of them. Nor do I know to which of the various states through which it runs, it owes prime allegiance.

Now the particular crimes of which this corporation has been guilty are, that it did its consolidating and increased its indebtedness without the approval of the railway commission of Massachusetts, thus, under the laws of that state, having made itself liable to forfeiture of its rights to do business in Massachusetts. Thereupon the attorney-general of Massachusetts reported these facts to the legislature of Massachusetts, and asked to know its pleasure respecting the forfeiture. Thereupon the president of the railroad makes reply to the attorney-general as follows: "The New Haven road has always acted under its Connecticut charter; nearly all of our railroad operations, all of our financial operations, all of our stock issues, bond issues, etc., our consolidations, etc., have been made under our charter with, and in accordance with, the laws of the state of Connecticut. It may yet be a case of the laws of Massachusetts coming in conflict with the laws of the state of our birth." It would appear from this reply, that the New Haven (as the railroad is called) owes its origin to the state of Connecticut, and being a Connecticut corporation it may do whatever the laws of that state permit it to do. But the laws of Connecticut may allow this corporation to do a

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great many things which the laws of Massachusetts prohibit it doing. Likewise the laws of Rhode Island may be at variance with both those of Massachusetts and Connecticut. And then, there is New York to be reckoned with also. Now, to which of these states must the New Haven apply for permission to do any act? Here is a corporation owning a railway extending into four jurisdictions. Must it in its corporate doings conform to the conflicting laws of each state? Or shall we say that the state of Connecticut can confer upon one of its corporations authority to violate the laws of Massachusetts?

We have here an illustration of a weak spot in the American scheme of government. In the very nature of its calling a railway cannot pay much more respect to an imaginary state line than the wind does. And yet it is of very great importance to a state in which a railway may have its physical property, to be able to control its corporate acts, and especially the amount and character of its indebtedness; for upon these, rates are most largely based.

The conditions above set forth prevail all over the United States. You may say that it is quite universally true, that every railway corporation in the United States is chartered or organized under and by the laws of some particular state. Yet directly or indirectly, all our great railway corporations own railways extending into other

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states than the one to which they owe their origin. Blanket mortgages as well as stock issues are constantly being made by these corporations in conformity with the laws of the state of their origin, but affecting physical properties in other states, and without any reference to the laws of these other states. It may be true that these corporations have obtained the permission of the states into which they have extended their lines. And it is also probably true, that the laws of most states permit railways chartered by other states to be extended into their territory. But that is not the point. The point is that there may be railway corporations existing by virtue of the laws of one state, owning no railway in that state, yet owning railways in many other states. In such a case the state wherein the physical property of the railway lies, may have nothing whatever to say concerning the *corporate acts* of the corporation which owns the road.

These corporate acts are of the utmost importance to the corporation. The laws of the state under which a corporation is organized, determine, among other things, the purposes for which the corporation may exist, and these may be either very limited or may cover every conceivable kind of business; the period for which it may exist, and this may be for a limited number of years or forever; the amount of the capital stock and the amount which must be paid on subscrip-

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tions to capital stock, and this may be nothing or the par value; the assessibility of the stock and the personal liability of stockholders; the number of directors, their residences, their duties and liabilities; the right of the corporation to contract debts, issue bonds; and generally the doing of any and every act which the corporation may do as a corporation.

Now, note the far-reaching consequences of the facts just recited. The amount of the stock and bond debt of a road is a matter of vital importance to the people of the state in which it is physically located, because, upon the amount of these depends largely the rates which may be charged. The liabilities of a road are supposed to represent approximately its value, and since it is entitled to a fair return upon the money invested, the state freight and passenger rates cannot ignore the railway's obligations. Yet it may well be doubted whether any state except the one to which the corporation owes its existence, has the slightest thing to say upon these most vital subjects.

When you come to consider that form of railway corporation known as a holding company, you will find that it generally has selected as the state of its origin one in which it owns no railway at all, thus completely dissevering its physical operations from its corporate and financial operations. Of this kind of railway corporation the Southern

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Pacific Company affords a typical example. It owes its origin to the state of Kentucky. It owns not a foot of railway in that state, but it controls railways in Utah, Nevada, Oregon, California, Texas, the territories of Arizona and New Mexico and perhaps elsewhere. Not one of these governments has the slightest voice in making laws which shall in any way affect this corporation except the state of Kentucky.

It may be not inappropriate to inquire what interest the people of Kentucky have in a railway corporation which does not own any property or do any business in that state. Their interest is exactly confined to the amount of revenue their state can collect from the corporation, as a consideration for allowing it a franchise to do as it pleases. And as the amount of the tax increases with the size of the capital of the corporation, the more exaggerated that is, the better it suits the state granting the charter. Indeed, certain states have actually made bids for corporations to organize under their laws, by making conditions easy for corporations so organizing. It is rather too much to expect that the legislature of Kentucky will look after the interests of the state of California. So far as I am able to ascertain, the only interest which Kentucky has shown in the Southern Pacific Co. is exhibited in a laudable attempt to get from it a few millions in taxes.

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Here then is a condition which may and does exist under our scheme of government, whereby a corporation may lawfully exist with no control over its corporate acts by any state which may be affected by those acts.

"But," you say, "where a corporation, such as one of these holding companies, controls railways operated in several states, it is engaged in interstate commerce and is therefore amenable to the laws of congress." This may well be doubted. A holding company pure and simple is not a corporation which owns railways; it is a corporation which owns the stocks and securities of railways. By virtue of its ownership of voting stock, it is enabled to control the corporations whose stocks it owns. But except in the fact that it is a corporation, a holding company does not differ from any individual owning the same stocks. It may therefore be doubted whether a holding company is anything more or less than a corporation of the state to which it owes its origin, and therefore not subject to federal control.

I think there is a current idea, that the Northern Securities Case decided contrary to the views just expressed. It is true that the Northern Securities Co. was a purely holding corporation organized under the laws of New Jersey for the purpose of owning securities of railways operated in other states, and it was held subject to the anti-trust laws of congress. But this was so

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held not because it owned these securities, but because it was a corporation expressly organized for the purpose of acquiring the stocks of competitive roads and for the purpose of stifling competition between them. And, moreover, it did not purchase these stocks. It merely exchanged its own stocks for the stocks of the railways.

What the court really decided by a bare majority was, that this corporation was organized for unlawful purposes—to engage in business prohibited by the laws of the United States. The court expressly disclaimed the contention that congress could control a state corporation in its acquisition of the stocks of railway companies, even though these companies were engaged in interstate transportation, unless the effect of the ownership was to restrain competition.

What then is the situation? It is this: the scheme of federal and state government under which we are operating, permits the existence of a corporation under the laws of some particular state having no interest in the control of the corporation, which corporation may control the operation of the physical properties of railways situated in other states, and neither these other states nor the federal government have the slightest control over it. As such, the corporation is practically without any governmental control whatsoever. There is no inherent objection to the before-mentioned Kentucky corporation be-

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coming the owner of the stocks, and therefore the controller of the operations of all non-competing railways in the United States.

What is the next step? Ordinarily the control of a corporation is changed by a sale or transfer of its corporate shares. But that is not the only way that this may be accomplished. The stockholders of a corporation own the physical property of the corporation, and, ordinarily, they may authorize the sale of such physical properties the same as the owner of a house may sell it. Apparently the only limitation on a railway corporation selling its railway is that, under existing laws, it may not be sold to a competing road. The right to sell is the right to enjoy property. It is a necessary accompaniment of unlimited and unrestricted ownership. It is no less valuable than the right to own at all. It is a right which, in its essential attributes, neither congress nor any state legislature can limit, without overturning the very foundations of our government and our civilization. There is, therefore, no inherent impossibility in a railway corporation, owing its origin to the state in which its physical properties are situated, transferring these physical properties to a non-resident corporation, the resident corporation winding up its affairs and ceasing to exist as a corporation. Thus the state completely loses control of the corporation itself.

“But,” you say, “wherever the ultimate of

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stock may be lodged—whether in a non-resident holding corporation, or in non-resident private parties, and no matter whether the title to the railway remain in the resident corporation or be transferred to a foreign corporation, this fact remains—to wit: that the physical properties of a railway must always be in some state, and the state in which they are situated must ever retain over them the essential attributes of sovereignty; that is, the power of taxation, the right to regulate their physical movements, and the right to regulate the rates which they may charge for their services.”

But you are wrong. These rights of the states were taken from them by the Fourteenth Amendment to the federal constitution. I do not, of course, mean that the states have not still the right to legislate on these subjects. What I do mean is, that the validity of its legislation is no longer subject to the decision of its own judicial tribunals. Jurisdiction in that respect has been transferred to the federal court. With that transference, practically the last shred of control of the states over their own corporate creatures passed away, resulting in the mere negation hereinbefore referred to.

It would thus appear, that by reason of the inherent weak spot in our scheme of government co-operating with the Fourteenth Amendment, railways, as well as other corporations, are enabled

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to find practical immunity from governmental control as to certain matters of vital importance to the states, to the general government and to the people. By reason of the lack of jurisdiction of the federal government over the *corporate acts* of corporations of purely state origin, or even over such corporations as own and hold control, by stock ownership, of railway corporations engaged in interstate business, and by reason of the lack of jurisdiction of the states in which the physical properties of railways are situated, over non-resident corporations owning or controlling them, and by reason of the lack of finality of state legislation over even its own corporations; there practically exists an hiatus in this country in the governmental control of railway corporations.

The main trouble is, that we have no governmental agency which can at one and the same time be brought to bear upon the corporation *as a corporation*, and upon the physical operations of the corporation. The civil jurisdiction in which the corporation came into being, cannot, if it would, be brought to bear upon the physical operations of the corporation, and the civil jurisdiction in which the physical operations are carried on, cannot be brought to bear upon the corporate acts of the corporation. From the standpoint of the corporation, there was ample reason why the Southern Pacific Co. should have

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chosen Kentucky as its birthplace, and why innumerable corporations having no business in New Jersey, seek the twilight region of that state for immunity from governmental control of their corporate acts.

But whether or not I am right in the conclusion that there is a legislative vacuum in our scheme of dual government; I think no one who has attentively studied the matter can doubt, that the scheme is about the awkwardest and clumsiest that could have been devised. And this is shown not only in the inability of any governmental authority to grasp the transportation problem in its entirety, but it is equally true so far as the organic growth and development of our transportation system is concerned. It is to this latter aspect of the problem that I would like to direct attention.

In no aspect is commerce so obviously national as in the operation of the facilities by means of which products are distributed. A transportation system should be nothing but the provider of the very best means by which the physical movements of commerce can be effected. Neither has the national government, nor any state government, the slightest reason to make it anything else, nor to throw any obstacle in the way of the system's attainment of that end.

It is said that eighty-five per cent. of our internal trade is trade between the states. It therefore

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follows that eighty-five per cent. of our facilities of transportation are devoted to interstate trade. But in a wider sense, all our transportation facilities are devoted to interstate trade. For however distinctively intrastate a railway may be, it amounts to nothing, unless it is also engaged in carrying freight which has originated outside of the state or is bound outward. Thus, at one time or another, every and all transportation facilities which we possess are engaged in interstate traffic.

Now what is the situation? Not only have we no co-ordinated transportation system, but the unco-ordinated parts of such a system as we have, are subject to no common government control. On the contrary, directly or indirectly, every part of our system is subject to the control of one congress and forty-five legislative bodies. It is idle to look at it otherwise; for every state regulation affects, directly or indirectly, every railway in the United States; unless, indeed, there be some state that is so poor that it has no commerce with any other state—a condition which happily will not be found. So we have one congress by its delegated authority—the commission, trying to fix rates on the eighty-five per cent. of interstate traffic, and forty-five states, more or less, trying to fix rates on the fifteen per cent. of intrastate traffic, and by their conflicting manœuvres, constantly throwing out of gear the entire transportation of the country.

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And this is true to a greater or less extent, concerning the financial operations of the railway corporations; as witness the illustration before given of the possible action of Massachusetts, in forfeiting the right of a railway to business in that state because it had not applied to it for authority to increase its debt. Can any more cumbersome scheme be imagined, or one less calculated to develop the facilities by which commerce is carried on between the people of this country?

What the fathers would have thought of it

It would be interesting to know what attitude the framers of our constitution would have held toward transportation, if it had existed when the constitution was made as it does now. Knowing transportation as we have it to-day, it requires a lively imagination to see it as it was one hundred and twenty odd years ago. Knowing transportation as it was then, it was infinitely more impossible for the fathers to see it as it is now, than it is for us to see it as it will be one hundred and twenty years in the future. It is sufficient to say that there is not a facility of transportation as we have it to-day, of which they had the slightest conception. The last remnants of colonial transportation are the utterly unimportant sail boat occasionally seen, the ox cart and the stage

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coach of the sparsely inhabited regions. Even the prairie "schooner," or freighter of the present day was unknown.

But while the fathers had no conception of modern transportation, they knew that there would be commerce among the people of the different states. And that which is clearer than anything else in the constitution is the intention of its framers, that there should forever exist absolutely untrammelled and unrestricted freedom of trade throughout the length and breadth of the United States. The states were absolutely prohibited from imposing any barrier to commerce among them. Likewise, the nation prohibited itself from imposing any barrier to such commerce, or to the making of any regulation which should give any preference to one port over another. The sole power which the nation retained over commerce between the states, was the power to regulate it.

Certain authorities have considered that the power to regulate commerce is the power to prohibit it. Such an interpretation is utterly repugnant to the whole spirit of the constitution. So far from the power to regulate being the power to destroy, it is rather the power to keep commerce free from obstruction—to prescribe the orderly regulations by which it may be carried on. At any rate, the dominant idea was that the states should never do anything which in any

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way restricted commerce among them. Whatever regulating was to be done was a national affair. So much for this conception of the fathers.

There were certain other matters which the framers of the constitution thought should be reserved to the nation. Among these were the power over the currency of the country, the fixing of the standard of weights and measures, the enactment of uniform laws on the subject of bankruptcies and the establishment of post-offices and post-roads. Upon these subjects the authority of congress is supreme.

What is it that at once strikes one as the predominant characteristic of the subjects which the constitution makers left to national legislation? Is it their relative importance? By no means. No one would for a moment hold that bankruptcy is a matter of equal importance with marriage and divorce, the relations between parent and child or inheritance laws. Yet each state was allowed to legislate upon these subjects without federal restraint. Important as are laws on weights and measures, they are not to be classed with laws the subject of which is the ownership and sale of lands and personal property; yet these are left to the states to deal with as their respective policies may dictate. Laws regulating currency and post-offices are important, but of lesser importance than laws which make certain acts criminal; yet the states have almost

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exclusive jurisdiction of the subject of crimes and their punishment. No; the predominant characteristic of the subjects over which the law-making power was delegated to the nation is, that these subjects concern what we broadly call commerce—the trade relations among the people. And a closer examination of them discloses the fact, that they have to do almost exclusively with what we call distribution as distinguished from production and consumption. For what is the post-office but the means of intercommunication among the people? And what is the currency of the country except the circulating medium for the settlement of trade balances? And what are bankruptcy laws but facilities for the uniform distribution of trade losses? Even weights and measures are for the most part the means of standardizing the relations between producers and consumers.

If to these powers of the nation you add the power to regulate commerce, including transportation, among the states, it will be at once seen that the powers which the framers of the constitution delegated to the federal government over its internal affairs, concerned the distribution facilities of the nation. It was to keep these unclogged and free from confusion, that authority over them was taken from the states. If these subjects had not been turned over to the central power, see how our distribution facilities would have

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been thrown into inextricable confusion. We might have had to-day forty-five different kinds of coins and as many different kinds of paper money; forty-five different standards of weights and measures; forty-five different bankruptcy laws (and we sometimes have had nearly that many); forty-six different postal systems—one for each state and another between the states, just as we have, unfortunately, forty-six systems of railways and railway regulations, one in each state and one between the states!

Is it conceivable that the men who framed this great law, who took such infinite pains to keep under national control every agency which facilitates free inter-communication and trade among the people, would have permitted the overwhelmingly great means of inter-communication to have been hampered and thrown out of adjustment by scores of conflicting regulations, had they conceived the magnitude and importance of our railway system? And especially can such an idea be entertained, when we see that they conferred upon the nation the authority to make post-roads, which would of necessity have been under exclusive national control, even though they ran into the very heart of every city in this land? There is not an argument in favor of the unlimited control of postal affairs by the central government, which is not equally applicable to such control of the facilities of transportation, and there are

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a score of potent arguments in favor of the latter which are not applicable to the former.

For what reason did the makers of our constitution not leave it to the several states to establish and maintain a postal service within the respective states for their own citizens, while the United States carried letters which were addressed by the citizens of one state to the citizens of another state? No doubt, if the federal constitution had so ordained, the provision would have been considered by many the "palladium of our liberty." Yet had the federal constitution so provided concerning our postal service, no such confusion could have arisen as that which follows the relegation to the several state governments of the control of transportation and railways within the states, while leaving to congress their control as between the states. It is the simple truth, that we can never hope to get rid of the wrongs in our transportation system until it is brought under one control, nor can we ever hope to have it controlled until it is brought under one control, nor can we ever hope to have it developed into its perfection as a servant of the people until it is free from the annual stabs of forty-five legislatures and one congress.

If this matter be viewed from the standpoint of the public welfare, then it is obvious that we will never be rid of our weak, wasteful,

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over-capitalizing, fictitious-stock-issuing, criminal, railway financial scheme; so long as we have Kentucky and New Jersey railway corporations owning and controlling railways in distant states. Yet there is no power in the federal congress to prevent the existence of these corporations, or to control their financial methods when they are created. Nor can we ever hope to be rid of this jumble of fictitious railway securities which now infest the markets, perennially sponging up the savings of the people, so long as the corporations which issue them can find the shelter of a state which will permit such corporate acts. And when will come a time when such a state may not be found? If stability of railway securities is a desirable thing, how ever can you expect to have them stable while corporations may issue them at their will and different securities of the same company range all the way from nominal to par and as much above par as manipulation may make the price?

If, on the other hand, you view this matter from the standpoint of railway corporations which earnestly desire to give to this country a first class, safe, adequate and economical transportation system, how can you expect them to accomplish that end, while they are subject to conflicting laws of different states—while they may not raise money lawfully in one state, without having their right to do

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business in other states forfeited? How can you expect to have an organized and co-ordinated transportation system, while all the disorganizing and disco-ordinating forces are playing upon their several parts?

I see no hope for an honest, safe, adequate, economical, transportation system in this country, until the states surrender the semblance of authority which they now have over intrastate transportation, and all things relating either to the corporate or financial affairs of railway corporations as well as their physical operations be placed under a common control. Of course, this cannot be done without a constitutional amendment. But let me say now, that if such an amendment would have the effect either to centralize greater power in the federal government or create a transportation monopoly, I would a thousand times sooner suffer the ills we have than even suggest a change. It is chiefly because we are fast drifting to an uncontrolled and uncontrollable transportation monopoly, and because the power of the federal courts to negative the legislation of the states has already centralized power in the only irresponsible branch of the federal government, that I think a constitutional change should be of such character that it will bring the transportation monopoly under the control of a fixed law, and at the same time render harmless and responsible the centralized control.

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A SUGGESTED CONSTITUTIONAL AMENDMENT

(Continued)

Referring back to the man of common sense we met; if an attempt were made to generalize his rather crude ideas on the subject of transportation, they would seem to fall naturally into two classes:

1. The integration of all our means of transportation into one harmoniously working system.
2. To make all questions between the transportation system and the people judicial questions, with well defined rules, however, for their decision.

Strange as it may seem, his ideas are quite in line with the tendency of the age. For what is the interpretation of all these mergers, absorptions and consolidations of railways? Plainly, their meaning is that there is a rough and tumble attempt being made to eliminate needless friction, to establish a harmonious moving equilibrium of transportation forces. But natural evolution, though thoroughly effective, knows little of justice. This integration carried on by the process of natural evolution is cruel in its mode of exterminating the weak, and savage and corrupting in its exercise of unrestrained power. Our friend, therefore, proposes to substitute for the cruel process of natural evolution, an intelligent process by which the rights of all are recognized, and the grand end still attained.

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And what is the interpretation to be put upon all these impotent legislative acts of state and nation? It is simply that the questions with which they have been concerned are not, under the constitution as it now stands, legislative but judicial questions.

But here we are met by a most anomalous condition. The legislative authorities, state and national, have power to legislate upon the subject of transportation, but having legislated, as before often stated, the courts have power to veto that legislation. But, of course, the courts are not endowed with any power to say what the legislation should be. They have simply the power to negative legislative action. They may declare what the legislature has done to be unjust and unreasonable, but they have not the power to say what would be just and reasonable—at least they have not that power without encroaching upon the purely legislative domain. And such exercise of legislative power as the courts are able to avail themselves of, is unadapted to settle the important questions in any broad or general way, but only by piecemeal, as each particular question comes before them.

To obviate this anomalous situation, our friend suggests that the people in the exercise of their supreme legislative power, shall define the relations which shall exist between them and their transportation system in such a manner as will

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be binding on both the legislature and the court. While many questions of a judicial character will remain, the court will be provided with well defined rules and principles to govern it in its decisions.

Whether the makers of the constitution, had the situation then been as it is now, would have inserted the provision giving congress the power to regulate transportation throughout the United States, no one can more than surmise. When power was granted to congress, it was granted without limitation; when it was denied, there were no exceptions or provisos, and always the most general terms were used. But all this aside, I think it would have been and would be now, most unwise to grant to congress power to regulate transportation both state and interstate. This chiefly for two reasons:

1. Congress might not use its power in the way the people wish.
2. It might not use the power at all.

Only the latter of these reasons will be given any space. It is well known that there are two kinds of constitutional provisions: one is self-executing and requires no legislative act to give it force. It becomes the law and the supreme law, immediately upon its adoption. The other kind is a mere grant of power to the legislature, giving it the authority to legislate upon such and such subjects if it choose to exercise that

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power. If the legislature does not act, the constitutional provision simply lies dormant forever. Hence if there were a constitutional amendment which merely conferred on congress the authority to regulate transportation, intrastate as well as interstate, it might never do anything.

There are dangers in this. One branch of our congress even, could long defeat the will of the people, and, unfortunately, it has not been found unwilling to do so. Again, if the power were given congress to regulate transportation throughout the United States, it is not difficult to perceive that, owing to the multifarious nature of present railway obligations, and like existing conditions, any attempt of congress to exercise its power, might lead to a conflict with other constitutional provisions. At any rate, anything that congress under such a grant of power could do, would be subject to challenge in the courts.

For every reason, then, in my opinion, a constitutional amendment should be adopted which, so far as possible, will be self-executing. Such a constitutional amendment might be roughly outlined somewhat as follows:

It would confer original jurisdiction on the Supreme Court.

A. To judicially determine the value of the assets, and the validity, priority and equitable standing of the liabilities of each corporation engaged in the transportation of persons, com-

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modities or messages within the United States, or between the ports thereof, except such corporations as are exclusively urban and such others as congress might exempt from the operation of this provision. And thereupon to cause to be issued to the holders of the liabilities of such corporations, according to their respective priorities and equities and to an amount not in excess of the value of the assets of each particular corporation, certificates of ownership thereof, equivalent in amount to their respective claims, every pre-existing liability of each of said corporations (except current debts) becoming thereupon null and void. And provide,

B. That the owners of such certificates, their assigns and successors, should constitute a body corporate forever, exclusively to transport persons, commodities and messages within the United States and between the ports thereof, on terms of uniformity and without preferences to persons or localities; that the capital of such a corporation should be the value of its facilities and should be divided into shares of the par value of one hundred dollars each; that it should be managed by directors, the number, duties and terms of office whereof should be as determined by its shareholders; that it should charge for its services rates which should be sufficient for its maintenance and to pay dividends on its shares on a basis of 5%; and that its commodity service should be

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so classified that the necessities of life, according to their respective money values per weight and bulk, should be charged the lowest rates. And,

C. That a court should be constituted, having original, exclusive and final jurisdiction in any cause wherein complaint should be made that said corporation was conducting its affairs contrary to this provision, or in violation of any act of congress made in pursuance thereof; and in any controversy between said corporation and its employees. That this court should have supervision of the financial affairs of said corporation; and that it should judicially determine, upon the petition of its directors, or the public, the necessity for new or additional facilities to secure safety or adequacy of transportation and the cost thereof, and the approval of all contracts relating thereto, and the issuance and sale of additional stock, in all respects upon a parity with other stock of said corporation, for the cost of such improvement; and that it should have such further jurisdiction as congress might confer upon it. And,

D. That said corporation should pay an annual tax of 1% upon its capital stock, to be distributed to the several states according to their respective populations.

That which is too apparent need scarcely be said. Obviously these suggestions are but the sketch of a plan. They make no pretense to detail.

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It has been attempted to make the key-note of this scheme, justice tempered with equity; justice to the capital invested in railways, because it gives a reasonable return upon the capital invested; justice to the people, because the rates they pay will be sufficient only to maintain a transportation system, upon the efficiency of which, their welfare so largely depends; justice tempered with equity, because the state in its neglect to guard the rights of the people has permitted the growth of wrongs to which it has been a silent party, to shirk the responsibility for which would be cowardly.

It is especially important that it be at once perceived that there is nothing revolutionary about this proposal. It but marshals us in the way that we are going. But it pretends to substitute intelligent organizing action in the place of brute force. It endeavors to eliminate the economic waste which must necessarily follow in the footsteps of railway evolution as it has been carried forward in the past, and as it will be carried forward in the future, if left to itself.

PROPOSED AND IDEAL TRANSPORTATION SYSTEMS COMPARED

Would the transportation system contemplated by this plan conform to the requirements of the ideal system?

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Would it be the means of providing and maintaining a system at once safe and adequate?

Would it destroy the possibility of the disgraceful wastefulness and lack of economic methods of our present system?

Would it serve to obliterate all preferences as to persons and places in the use of transportation facilities?

Would it remove the possibility of its trustees using its capital to their personal and illegal profit?

Would it eliminate the railways from American politics?

These questions may be answered briefly. It has been shown how unsafe and inadequate the system is at present, that numerous changes must be made to insure safety, that a vastly increased mileage is necessary to insure efficiency, that billions of dollars will be required to accomplish these results and that the means are not forthcoming to bring them about. The primary cause of this is the justly deserved loss of confidence which the management of our railway system has suffered, coupled with the inherent weakness of our railway financial method.

If the people were convinced that their investment in railroad securities would bring them a fixed return of five per cent., there is not the slightest doubt that the millions would pour forth their dollars. If under the ruinous, rotten management that has prevailed in the past, if, uncertain whether

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they would ever get back either their principal or interest, they have furnished the money to build the system as it has been built; can any one doubt their willingness to come forward with all required amounts, when they have the assurance that the transportation scheme herein outlined is to be the permanent American railway policy, that the financial affairs of the system are under the eye of a court, that improvements and new roads would be made only after judicial investigation as to their necessity, and that awards will be made only after due scrutiny? Aside from these considerations, the security would be the best in the world, for the proposed act is practically automatic; the rates would be such as to produce the revenue. It would be in effect, a uniform tax upon all who use the transportation facilities, in proportion to the benefits received.

If it be said that these changes to produce safety and efficiency may make the rates higher than at present, the question is whether the American people are willing to pay for safety, or would rather be slaughtered through their parsimony? I do not know whether the rates would be raised or lowered and, within bounds, I do not care. But this I do know, that the American people have never yet shrunk from a duty no matter what the cost, and that no greater duty rests upon them than this of providing a safe system of railroad transportation.

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Would the system be economical? This at least may be said, that the stability given to the securities would be such, as to forever prevent the possibility of such losses to the country as it has sustained through railway bankruptcies, market manipulation and the panics of the past. Such losses as these billions of dollars in the late panic—more than double the cost of operating all the roads during the same period—could never again occur.

Something has been said above on the security of railway investments. It may be added here, that the only possible hazard in the investment would be the possibility of some other method of transportation supplanting the railway. As to this, it would seem that human ingenuity has been exhausted in the application of the flanged wheel on a smooth rail over a level roadbed, at least for all distant travel and heavy land traffic. Doubtless motive power may change, and indeed it is not unlikely that a power cheaper and better than either steam or electricity may be devised. But as to wheels, rails and roadbeds, they will stand against the airship for some time, at least for heavy freight.

The economy resulting to the whole country from the securities of railways being made fixed and stable can scarcely be over-estimated. When it is remembered that one sixth of the wealth of the whole nation is invested in these securities, that the very stability of many institutions depends

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upon the stability of railway securities, that they are the principal collateral upon which commercial banks make their loans; it will be readily understood that a country possessing wealth of a character so undisputed would be at once the richest and financially, the most stable country in the world. The stability of these securities would open the markets of the world to them, and their readily realizable character would enable our bankers to anticipate times of money stringency, by their conservative use in foreign markets. They would, in fact, become the balance wheel of American finance. It can hardly be doubted that they could be used to replace the growing deficiency of United States Government bonds as security for the circulation of national banks, or, at least, serve as security to the government for temporary loans, if we are to continue our national bank system.

Not to compare small things with great, there would be a relatively enormous saving in the cost of the operation of a system under one management. Thousands of employees, for the most part, of the least desirable class, would be at once lopped off. The vast army of political parasites that live off the system, the tax agents, traffic solicitors, and some thousands of unnecessary lawyers, directors and like expensive luxuries, would be turned out to make a living by means, at least, no less reputable.

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The saving resulting from wiping out senseless competition, from the distribution of business from over-worked to under-worked roads, from the elimination of some utterly useless and therefore burdensome roads, from the building of unnecessary and therefore burdensome roads, would mount into the millions. But these are pennies. The great economy to the country would come from the stability of railway investments.

That rebates and all the criminal practices growing out of the preferences shown to persons and places would at once disappear is evident; for with the elimination of competition would go every excuse for their existence.

That this system would do away with the possibility of the manipulation of railways and their finances by their trustees, that such a monstrous outrage as the late Alton deal could never occur again, goes without saying.

After the consolidation of all roads into one corporation, the construction of new roads and the issuance of the stock therefor being subject to judicial decree, the trustees, to advantage themselves would have to resort to the methods of the criminal till-tappers,—in short, make themselves ordinary thieves, instead of respectable “predatories.” The Stock Exchange would, so far as railway securities are concerned, become what its name indicates it should be—a market

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where fair values may be received from the exchange of values, instead of a gamblers' resort. A propos, it may be remarked in passing, that having once laid this scheme before a prominent stock-broker, he asked that he be given notice of its adoption so he could sell his seat on the Exchange. Argument that legitimate business would take the place of illegitimate was without avail.

But all other advantages do not, in my opinion, weigh in the balance with that which would come from the banishment of the railroads from American politics. This government could survive the destruction of its railway system, but it cannot survive the destruction of the manhood of its people. Popular government cannot persist with a corrupt populace. It would be cheap to the American people to give to every rascal the par value of his stealings, if by so doing we could forever be rid of his pernicious influence upon American social and political life.

Seeing that this proposed system answers in a marked degree the requirements of an ideal transportation system, it still has to answer sundry inquiries of great importance.

Is the proposal just to the existing system?

Can it in any way work evil to the American people?

Does it tend to the concentration of power in the federal government at the expense of the state?

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Would it tend to destroy individual incentive?

Would it meet the views of the stock gamblers, manipulators, banking syndicates and the like?

Is it practical?

The last of these inquiries may be taken up first. Obviously if the plan is not practical, it is unnecessary to consider any other objections to it, while any other objection will appear all the more prominent when considering whether the scheme is practical.

IS THE PROPOSAL PRACTICAL?

I. CAN OUR RAILWAYS BE FAIRLY AND JUSTLY APPRAISED?

Who shall appraise them?

We shall now proceed with the successive steps by which our unco-ordinated transportation facilities may be organized into an harmoniously working transportation system. Obviously if these parts are to be joined together, the first requirement of justice is that the respective members be fairly appraised. Who shall be the appraisers?

There are several ways of making an appraisal. The ordinary method is for each opposing interest to appoint one or more appraisers and if these fail to agree they appoint an umpire who decides between them. This method, while appa-

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rently fair, has certain well known disadvantages. As the appraisers who are appointed are always partisans, they are much more like attorneys than judges, so that the decision is really left to the umpire. Besides such appraisements are frequently subject to contest from some cause. The verdict of mankind is that the best method of settling a disputed issue is to leave it to an impartial judicial tribunal. Nor am I greatly in favor of commissions. These bodies are neither administrative nor judicial. Their decisions, however righteous, are viewed with indifference and unfinality. The inherited respect due to a judicial tribunal is lacking. And in addition to these reasons there are sundry other matters which are necessary concomitants of appraisal, such as the determination of the respective rights of security holders, which are purely judicial in their character. Undoubtedly the same tribunal which makes the appraisal should have jurisdiction of the entire subject matter.

I think it will be agreed by all, that the judicial action contemplated should be performed by one and not by many tribunals. The uniformity and consistency of results so requisite to such an undertaking, could only be effected by one court possessed of jurisdiction to call before it, and take cognizance of, every interest involved.

We have the choice of conferring such jurisdiction upon an existing tribunal or creating a

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new one. Above all things, it should be a tribunal in which all the people, and all those interested in the result, should have the most absolute confidence. If it were a tribunal specially created for the purpose, it might be subject to the suspicion that its members were appointed because of preconceived opinions. As the appointing power would be lodged with the president, his own strong views as to the results desired, would almost of necessity lead him to the selection of men known to hold like views; he certainly would not choose those holding opposite views. The confirming power being in the senate, it is not unlikely that the whole matter would resolve itself into something of a political farce, if nothing worse.

It would therefore seem that it would be better to confer this great power upon a tribunal already in existence, accustomed not only to recognized forms of procedure, but to dealing impartially and therefore judicially with causes brought before it.

There is another factor of almost equal importance to be kept in view. Such a tribunal should possess not only original but *final* jurisdiction to determine all questions, and should determine them all at the same time. The magnitude of the interests involved is such, that quite every case would be taken to the court of last resort, if they were required to be first submitted to inferior tribunals. If, on the other hand, a new court were to be created with final jurisdiction,

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we would have the evil of two courts of last resort. For all these and many other reasons, it would seem, that the proper tribunal to which this important matter should be referred, is the Supreme Court of the United States.

It would indeed seem, at first blush, anomalous to confer upon the Supreme Court original jurisdiction in such a proceeding. If it were a question involving the dignity of the court; it might be answered that not in all times past have causes of greater moment been presented to any court. Involving, as in their aggregate they do, the rights of at least a million people who are directly interested in the securities of transportation companies, and probably seven millions more who are indirectly interested, and of the whole people as the users of the system; involving the relations of the million and a half of employees of the railway corporations; involving, also, one-sixth of the wealth of the United States, and indirectly affecting the total wealth of this country, the tribunal could not exist whose dignity would be lowered by hearing such a cause.

Of course I do not imagine that the Supreme Court would itself sit or hear evidence in all or possibly in any of these causes. The proceedings would naturally fall to the equity side of the court, and, the issues being made up, the court would refer the cases to commissioners to take the testimony and report it to the court.

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It is essentially the province of the Supreme Court of the United States to determine questions arising under the constitution. Original jurisdiction in certain controversies is conferred upon it by the constitution. There would be no objection to conferring original jurisdiction upon it in this matter, except the business which would be added to the court. But inasmuch as every matter would eventually be carried to it anyway, even if original jurisdiction were given to inferior federal judges, it is not clear why any greater amount of labor would fall to it in one way than in the other, especially as all the labor of taking testimony would be done by the commissioners of the court.

The inventory and appraisal of railways

A determination with anything like accuracy of the actual value of the property employed in the whole transportation system of the United States, is a problem so gigantic that to most people it would appear impossible. Involving, as it does, an assumed value of from twelve to eighteen billions of dollars—an amount inconceivable in the concrete; distributed as this property is over territory 3000 miles in breadth by 2000 miles in length, with varying mileage-cost of construction, with bridges, excavations, tunnels, fills and terminals; of level road-beds and moun-

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tain climbers; merely to discuss it seems thankless and staggering. If viewed in all its complexity—as railway people desire it to be viewed when they seek to deter inquiry—instead of in its simplicity, the undertaking may as well be given over.

The valuation of railways by each other

But there are some things well worth remembering. All these vast, heterogeneous properties have been produced. Almost inconceivably great and complex as some of the systems now are, they are all made up of individual railroad units. Not, indeed, of railroad units of uniform cost or value, but nevertheless of individual units. The Pennsylvania road is made up of some two hundred odd roads. So also, but to less extent, are other systems. These systems have been built up by processes of purchase, merger, leasing and the like. Is it possible that in these processes of consolidation of railroads they have not been valued? Do railroads buy other railroads, or do they buy large interests in each other, without regard to the question of intrinsic values? Of course they do not. To be sure, I would not claim that the mode of valuing roads so bought, merged, leased and consolidated, is the true method of valuation. I mention the fact merely to show that when railroad people want to value a railroad

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it can be done. It is only when they do not want to do it that it becomes an utter impossibility.

The "cost of road" accounts

There is one other thing worth remembering; not only have all these consolidated roads been valued for purpose of purchase, lease, merger, etc., and not only have the great systems been buying enormous blocks of stocks of each other, thus implying the valuation of each by the other, but there is another fact of even greater significance. It is this. Railroads have now been in operation so long, and so thoroughly and carefully have their accountants kept track of every item which enters into their problems, whether relating to traffic, to operating expenses, to maintenance of ways and equipment, or to the cost of construction, that there has resulted a body of statistics at once the most accurate and complete which exists on any subject whatsoever.

Nor is this all. The railroads have kept accounts, and they issue every year summary statements of these accounts, the details of which are supposed to be, and generally may be found, in their books. At the head of each one of these yearly balance sheets for each and every road will be found the items, "Cost of Road" and "Cost of Equipment," and in some instances the "cost" and the valuation of the other compara-

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tively few items which make up the assets of a railway; as, for instance, the "cost of real estate," "cost or market value of securities of other companies owned," etc. In short, the aggregate of these items of cost as pertaining to any particular road, shows the sum total which every item of property owned by the railroad is supposed to have cost it. Of course, the aggregate of the "costs" of all roads is but the sum of individual costs, and this sum total of the cost of all the important railroads and their equipment in the United States on the 30th day of June, 1907, was \$13,364,275,191. (I call your attention to the last figure of \$1.00 as showing how exact the railroads' accountants are.)

But this sum does not represent all the items which the railways claim as assets. It represents only the bare cost of the roads and their equipment. The roads own other more or less valuable assets, consisting mostly of real estate, materials and supplies, cash on hand, amounts due from other roads, and, largest of all, stocks and bonds owned by them in other companies. These items, when added to the cost of road and equipment, bring what the railways call their grand total of assets up to \$18,649,289,250, as of June 30th, 1907.

If therefore, to inventory and appraise the assets of any one road, or the assets of the entire system of roads, it was only necessary to ascertain

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the cost of the roads and their equipment and the value of all their other assets, the problem would be, from the railroad standpoint, one of exceeding simplicity. If the court accepted the railways' figures as correct, the entire transaction of inventorying and appraising the roads could be completed in a day, by the mere production of their inventories and balance sheets.

But I apprehend that the government, representing the public interest, would not be content to accept the railroads' books as conclusive evidence of the cost or value of their assets. It would be proper, if not necessary, to have expert accountants examine their books of account; for it is well known that in the past no inconsiderable amount of book-keeping jugglery has been indulged in. This would take time, ability and honesty, and nothing less than a most thorough and complete cross examination of the accounts of the companies would ever satisfy a justly suspicious public.

Nor would the government be compelled to rely upon the accounts of the railways as to their cost of construction, but it could, and should employ competent engineers to make careful estimates of the cost of replacing the roads. This would, of course, require, if the work was done expeditiously a vast crew of engineers working simultaneously over the United States. But both the magnitude and difficulty of this

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work are much more imaginary than real. For it must be remembered that nearly all of these roads were built in sections by private contractors, and if there have been, and are, railway contractors who have been, and are, willing to risk their money by taking contracts to build from ten to one hundred miles or more of road, without having anything to guide them but the plans and surveys, there are certainly plenty of men who are competent to estimate the cost-value of the same work when it lies before them.

While it is, of course, impossible accurately to ascertain the original cost of the construction of many of the roads, there is no inherent difficulty in ascertaining the cost of their replacement, or the value of their other assets. All the requirements are time, skill and honesty, the latter two being, indeed, qualities which are not picked up every day.

It is not, of course, expected that the conclusions thus arrived at would be figured down to dollars and cents. If they came within millions, all reasonable requirements would be satisfied.

But for some reason or other, whenever there is an intimation made that roads should be "physically valued," as it is called, a terrible howl goes up from the railroads and from their advocates. It would almost seem as though there was something inherently ridiculous in the proposition. An endeavor to ascertain what makes

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this proposition so ridiculous results in the discovery that the railways claim that the "physical value" of their roads is not a just criterion by which to judge their actual value. Looking at the matter from all sides, one is led to suspect, either that the items of cost of roads and equipment, as found on railway books, would not be justified by an actual inventory and appraisement, or else that there is some item of value which a physical valuation would overlook. Presuming for the moment, that the books have been honestly kept, let us see what this overlooked item of value is. I presume it is that intangible and incorporeal asset of a going business which may be called its franchise, its right to do business, the value of an established business, or, in a somewhat larger sense, the "good will" of an established business. The immediate and exact question now to be considered is, whether this element of value can, or should be, taken into consideration in an attempt to arrive at the value of any particular railway or the value of the transportation system as a whole.

The franchise value of railways

On this subject one may find any amount of diverse views. On the one hand there are the extremists who contend that a railway can have no value over the cost of its replacement. They

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are the kind of people who claim that the railways have already robbed the country of enough; that by watering and manipulation of stocks the "predatory rich" have made themselves multi-millionaires by their own fiat. On the other hand, you will hear railroad men claim that their brains built up the country, unmindful of the fact that the upbuilding of the country itself, as it has increased in population and industries, has made many a sick rail a dividend payer. Sometimes one would almost think that the railway men of the present day claim that they invented the railroad, and are entitled to the inventors' profits. Sometimes one will hear that the watering of stocks is justified, because such stock is of no great value any way, although it may become valuable in time. For instance, note the opinion of an able railway man recently given out apparently in all solemnity. I quote his exact words: "*As I said before, while some stocks may be watered, it is only a question of time when that water will be made good, when it will be solid land and no water growth. The progress and development of the country are so great and so rapid that all watered stocks will be on a rock bottom basis.*"

A man who could calmly claim that it is right to issue hundreds of millions of dollars of worthless paper, and sit down until the marvelous growth and development of the country make that paper worth par or better, is beyond the pale of argu-

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ment; he needs either an iron hand over him or an iron cage around him. What that man said was in reality this: "I have the right to lay the whip upon the backs of the farmers, merchants and manufacturers of this country and of the consumers of all products, and make them work for me for ten years in order that my counterfeit money may become real money." A proposition so monstrous would be inconceivable were we not so accustomed to hearing it.

Nevertheless, there may be a value in a railway in excess of what it would cost to replace it. By a straight course of honest management and dealings it may be able to produce an income on its cost greater than the rate which we would say, the money invested in it would justify it in having. But here we encounter very great difficulties. In the first place, we are unable to apply to the railway the rules which are applicable to such affairs in general. For instance: a manufacturing establishment may be earning 30% or 40% on its invested capital; the value of such a business is three or four times the actual amount of the money invested in it. The reason for this is, that there is no legal limit to the price at which a manufacturing establishment may sell its products, and, therefore, no limit to the amount of its profits.

But in the case of the railway the proposition is exactly reversed. The state claims and exer-

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cises the right to limit the amount which railways may earn. Therefore, the amount which they actually do earn under their restricted charges, is but a poor criterion by which to judge the value of the road over and above the actual cost price, or the cost of replacing it, or the capital invested in it. Still, so far as this element of value is concerned, it is perhaps the just, if not the only rule by which we can be guided.

If we take the case of a road which cost, and is capitalized at, say one million dollars, and if we say that under the restricted charges which that railroad company has been required to make, it has been able to earn dividends of 10% above all expenses, and if we say, under our new law, that reasonable rates are such as will produce an income of 5% on invested capital, it is obvious that such a road has an intrinsic value greater than its actual cost, greater than its cost of replacement and greater than its capitalization. If this is the right way to look at it, it becomes obvious that the question of franchise value is one which must be determined as to each particular road upon its own merits. There are some so grossly over-capitalized that they pay no dividends at all, and some few that are not even able to pay interest on their funded debt. As to all such roads, it is apparent that they have no franchise value, no good will, nor anything which should be added to the actual cost of replacing the road.

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The next evidence of value is the market value of the securities of a railway. As was stated above, ordinarily, the best test of the value of anything is what it will sell for in a free market, that is, a market subject to no other fluctuations than such as are caused by the law of supply and demand. Obviously, if the sale is a forced sale, like a sheriff's sale, it could be no accurate test of value. Likewise, if the market is subject to artificial manipulation, sales made in such a market afford but a poor test of value.

The New York Stock Exchange is the market for American railway securities. If we could indulge in the presumptions that the par value of all railway stocks and bonds had been paid into the treasuries of the companies, and that the money so received had been expended in the construction and equipment of railways, and that the railways had been permitted to charge rates which would return a fair profit on the capital invested, then these stocks and bonds ought to have at least average quotations of par in that great mart. Railway securities would, under such conditions, have a market value at least equal to their face value, or about \$15,600,000,000, as of June 30, 1907.

Rather unfortunately for the railways, the aggregate New York Stock Exchange value of their securities is some billions of dollars less than their aggregate par value. Inasmuch as

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railways have never been compelled by law to reduce their charges below what they could prove in court to be reasonable, and therefore should have been able to earn an income on an honest capitalization, it must be that the general public values railways securities very much below their par value.

Now, it is obvious to any one who knows anything about it, that the Stock Exchange quotations of railway securities on any particular day, may be far off from their actual value; for there can be no such fluctuations in actual values as the quotations of the Exchange show, amounting at different periods to as much as from 100 to 200%. But while the quotations for any day are no just criterion of value, yet upon the whole, covering a long period of time, the average of stock-market values is perhaps not very far from the actual values of securities.

If, for instance, we could take a period of five or ten years, and average the quotations during the entire period, it is not unlikely that the fair average value of the stock of any particular road would be arrived at. Doubtless, there are many things which would verify this conclusion. I refer to it now as a mode of valuation, more particularly because the railways having listed their securities on the Exchange, should be the last to complain of the facts as they are shown by the market which they themselves have selected.

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As above stated, it is perhaps unfortunate for the railways that the average market value of their securities is some billions of dollars below their face value, and some more billions of dollars below the total claimed value of their assets. Of course the Stock Exchange value should be a representation of the value of the total assets of a corporation. It may be strongly suspected that the objections which the railway companies have to an inventory and appraisalment of their assets is based not so much on the intrinsic difficulty of making the valuation, but rather on the fact that the valuation when made would show, as the market quotations of their stocks show, that their assets are not worth within several billions of dollars of what the railroad corporations claim they are worth.

Thus it would appear that to appraise railways, more and better evidence as to their value may be produced than is usually produced in a court of justice to determine the disputed value of property in litigation. This evidence may be summarized as follows:

1. Evidence from the books of railway companies, or builders, showing the original cost of construction, as well as of any permanent improvements affecting the original cost. Likewise the cost of all real estate with its improvements, the cost of equipment and the cost of any other assets.

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2. The cost of replacing any railway and its appurtenances at the time of the appraisal.

3. The average market value of a railway's securities over a period sufficient to even up the effects of artificial depression and exaggeration of values.

4. The commercial value of each particular road based on its earning power under rates heretofore deemed reasonable by the government. It may not be inappropriate to add, that in 1904 the Interstate Commerce Commission estimated the commercial value of all the railway property in this country on practically the basis of the last paragraph. The total value of the assets of all the railways as shown by their consolidated balance sheet on June 30, 1904, was \$15,495,504,651. The Commission's valuation was . 11,244,852,000

Difference.....	\$4,250,652,651
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II. MARSHALING RAILWAY ASSETS AND SECURITIES

The scheme herein proposed contemplates the extinguishment of the multifarious, malodorous, polyglot of existing railway securities, and the substitution therefor, to the extent of the value of *each* railway, of a simple uniform security bearing a fixed income. The value of *each* railway having been determined, the next step is the determination of the amount, character, valid-

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ity, priority and equitable standing of the bonds, stocks and other liabilities of each road. For let it be remembered, that, while the purpose is to organize all our transportation facilities into a transportation system, yet in the process of consolidation each road would stand upon its own merits. In the case of each road, the aggregate of new securities would just equal the value of the particular road, while the aggregate of all new securities would just equal the value of all transportation facilities consolidated. But the adjustment of the rights of the holders of liabilities in any one road, would not at all be affected by the adjustment of the rights of like holders in other roads.

Redistribution of securities

Broadly speaking there can exist, as to each railway corporation, but one of three conditions:

1. The actual value of a road may just equal the aggregate par value of all its bonds, stocks and other liabilities.
2. The actual value of a road may be greater than the aggregate par value of all its bonds, stocks and other liabilities.
3. The actual value of a road may be less than the aggregate par value of all its bonds, stocks and other liabilities.

What should be the principle governing each

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one of these cases? It is not the purpose of this scheme that it shall work the repudiation, or change in value, of any legitimate existing obligation of any railway company. While the purpose is that all existing securities shall be extinguished, and a uniform security take their place, and that such uniform security shall have the same *basis of income*, it does not follow that any existing legitimate obligation shall be repudiated.

For example, there are existing railway bonds bearing varying rates of interest, from as low as 3% to as high as 8% maturing at fixed dates. All these securities are convertible according to certain well established formulæ into a security bearing a common rate of interest. And so long as the aggregate of securities issued did not exceed the value of the property pledged as security, it could make no difference either to the public or the holders of such securities whether they were continued until their respective maturities at their existing rates, or were converted into uniform security bearing a uniform rate.

Perhaps this might be made clearer by a statement of facts concerning the interest-bearing debts of the railways. Of these about 21% bear interest at from 3% to 4%; 50% from 4% to 5%; 15% at from 5% to 6%; 7% at from 6% to 7%; while only about 2% bear interest at rates running from 7% to 8%. There is no principle of justice requiring that the holders of low interest bearing

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securities should be paid a higher rate during the life of their securities, nor is there any principle of fair dealing which should permit the new organization to repudiate the payment of high interest during the life of the securities bearing such high rates, provided the securities are themselves untainted.

Under past conditions the interest bearing obligations of railways and their stock obligations have stood upon very different bases, and a court of equity in marshaling the assets of a railway would not fail to relegate these different classes of obligations to their proper respective positions.

In the first case above stated, the corporate assets and liabilities were supposed to equal each other. If the value of a road just equaled the amount of all its liabilities, it would not concern the public as to the character of these liabilities, nor could it be a matter of any interest to the holders of different orders of liabilities at the present time, that securities uniform in character are issued to all of the roads' creditors. For every dollar of the new securities would be superior in value to the very best of the old.

Let us now look into the second case wherein the value of the railway's property is supposed to be greater than the bond and stock obligations. Here it is obvious that the bondholders and stockholders stand upon a different footing. The value of the railway's property, over and above

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the amount of its debts, belongs to the stockholders in any event, and if that value were greater than the par value of the stock, then, if an attempt were made to make all securities uniform and entitled to the same income, it is obvious that the stockholders in such a company would be entitled to have the excess of the company's assets in the form of additional stock. Suppose a railway to have cost and to be capitalized at two million dollars, represented by one million of bonded debt and one million of stocks. Suppose that under state regulation of rates making them "reasonable," such a company has been able to earn and pay dividends at the rate of 10%. With money valued at 5%, is it not clear that such a road is worth three million dollars? Under such circumstances could there be any justice in compelling the shareholders to accept in lieu of their shares one million of new stock paying 5%?

But here certain very awkward circumstances may present themselves. Under railroading as it has been carried on, certain railways have been able to exhibit fictitious earning capacities. One or more roads may be milked to furnish cream for a third road. This is a common and most uneconomical practice. It gives the cream-receiving road an abnormally high financial standing, and of course an abnormally low standing to the milked roads. It was shown in a former part of

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this book, how a very small minority of the capital of even a great system may control the system. When such a small minority of the controlling capital stock falls into the possession of another railway corporation, there is nothing easier than to work one system for the benefit of the other.

This is one of the processes by which some of our great trunk lines are now being built up. This is called able financiering and shrewd rail-roading. As a matter of fact, it is nothing more than an exhibition of the brute power of money. A man with the brains of a crossed bulldog and wolf, could do it as well as it is being done. The principal requirement is a brain utterly callous to the rights of security holders in the milked road. The court would have to be on guard against cases of this kind, where roads have shown fictitious earning power, solely by reason of their capacity to divert traffic to them and out of its natural channels.

The third case supposes roads having capitalizations in excess of assets. That there are such roads is obvious, from the fact that the market value of the securities of more than 50% of our railway mileage is below par, and that in many cases their stocks are regarded as nothing but a gamble.

The first principle governing the distribution of new securities to replace old ones in the roads

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falling in the third class, should be, that in *no case* should the aggregate of the new securities be issued in excess of the *actual value* of the roads. It is in the application of this principle that some injustice might be worked. But the question after all is simply this: whether a few supposedly innocent persons should be injured, or whether the whole American public, now and for all time to come, should suffer injustice? It must not be forgotten, that the stocks of railways have been in the past very largely a gamble, and if people choose to gamble in that class of securities, they cannot complain that the government in the exercise of its right to regulate rates according to the value of the road, should have made their gamble unprofitable. A different principle applies to them, than to the class of people who have actually furnished the money which went into and built the roads, and which is now largely represented by bonds.

Now, it has been the main justification for stock watering, that the watered stocks represent no great value anyway. If they do not do anybody any good, they do not do anybody any harm. If that be true, then my reply is, that it could make no difference to the stockholder holding five shares of stock the par value of which is \$100, yet which is selling at \$20.00 per share, whether he kept the five or had the five exchanged for one share of stock worth \$100.00. But this change would

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enormously cut down the capitalization of the roads as a whole, and that, I apprehend, is about what the American people are entitled to. Instead of waiting until the growth of the country shall build these stocks up to par value and a dividend paying basis, they have a right to shear them off now, and that should be done.

Generally speaking, therefore, in dealing with the three classes of roads, the court should give priority to such obligations as represent money actually paid to the company, and as to the rest of the obligations, they should be cut down to just whatever the actual assets of the company may be over and above liabilities, and that amount being found, should be distributed *pro rata* among the holders of the stock.

III. THE TRANSPORTATION CORPORATION

How the corporation should be created

All existing facilities of transportation having been inventoried and appraised, the respective rights of all owners in existing corporations having been determined and certificates of ownership issued to them, the next step is the organization of these certificate holders into a body corporate to carry on the transportation business of this country. How should such a corporation be created? It has been herein suggested that the corporation be created by the constitutional

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amendment itself. The proposed amendment provides that—the above things being done—the holders of such certificates of ownership, their assigns and successors, shall thereupon be a body corporate, etc. Thus the corporation is brought into being by the supreme legislative act of the people.

It may indeed seem strange, that this corporation should be brought into existence by an amendment to the constitution of the United States. At first blush such a proposal seems quite ludicrous. You say, "What! the staid, old, venerated constitution used to create a mere vulgar corporation! Ridiculous!" And those who are facetiously inclined will add, "why not at the same time create sundry corporations by constitutional amendments, one to manufacture steel, another to make electricity, another to do banking, etc." To all of which I answer, that transportation is unique in the industrial affairs of man. This is shown by the fact that nearly all governments of the world regard transportation as essentially a function of sovereignty, as, indeed, highways of communication have been from time immemorial. Even our own constitution makers hinted at it, in conferring upon the federal authority the power to establish post-roads. If I mistake not England is rapidly approaching government ownership of railways. If the census of the United States were taken to-day it is not

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unlikely that there would be found millions of people who favor government ownership and operation of railways in this country. However that may be, there is one subject upon which all are agreed—the fact that railways perform an essentially public function. So do certain other quasi public industries, but there is none whose function is so distinctively and so universally public as the agencies which conduct transportation.

But there are sundry other reasons in addition to the public character of the railway industry, which lead me to the conclusion that it is not beneath the dignity of the federal constitution to take cognizance of it. The corporation which would be created to do the transportation service of this country, would have to do with a sixth part of all the wealth of the United States; upon it would be dependent for support a twelfth part of all the people of this country, and the corporation itself would be the most vitally important industry, serving the welfare of the whole people. But, still, these are not the principal reasons why I think the corporation should be created by the constitution itself. The overwhelmingly important reason is, because the corporation and the service it performs should be forever removed from American politics, so that the corporation cannot use the government, and the politicians cannot use the corporation for their private

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purposes. How, then, does the matter stand?

If we are ever to be free from the unprofitable confusion which prevails, by reason of the railways being half under the control of congress and half under the control of the state legislatures, with the result of no control, but only confusion everywhere, that result can be accomplished only by an amendment to the federal constitution. For while congress has the undoubted power to charter corporations to engage in interstate trade, it undoubtedly has not the power to charter corporations to engage in intrastate trade. Since every railway corporation is engaged in both interstate and intrastate trade, it therefore follows that if congress undertook to charter railway corporations to engage in interstate trade, each corporation would have to be, so to speak two corporations or a double corporation; which has something absurd about it, not to mention the fact that instead of removing the conflict and confusion which now exist it would but serve to worse confound them. There is no way out of this muddle, except a constitutional amendment making transportation essentially a federal matter.

We, therefore, have the choice between creating a transportation corporation by a constitutional amendment, and conferring on congress, by a constitutional amendment, the power to charter such a corporation, with the incident of congres-

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sional power over the whole matter of transportation interstate and intrastate. In my opinion any objection to the use of the constitution for the purpose of creating such a corporation, must give way before the immeasurable harm which would follow from conferring such authority upon congress. If an amendment were adopted which, to the existing power of congress to regulate commerce among the states, added also the power to regulate commerce throughout the United States the states would at one blow be practically destroyed, because nearly everything we do relates directly or indirectly to commerce. Even if the amendment extended the power to congress to the regulation of transportation intrastate as well as interstate, it would enormously increase the power of the central government in all its branches but especially in the legislative branch. Congress would then have the power to deal with the entire transportation problem as it saw fit *or not to deal with it at all*. Thus the railroad question, instead of being eliminated from politics, would be embalmed in politics for all time. We would have such an era of political corruption as we have never supposed possible. If, on the other hand, the people by their supreme legislative act created the corporation and defined its rights, duties and obligations, there would be no incentive for the corporation to appeal to congress for privileges, nor any possibility for politicians to thrive

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by the threat, or enactment, of vicious legislation.

IV. THE BUSINESS OF THE TRANSPORTATION CORPORATION

Dissevering transportation from other industries

After the Supreme Court, or whatever tribunal should be given jurisdiction over the subject, had inventoried and appraised the existing transportation facilities, marshaled the assets thereof and caused its commissioner to issue to the respective owners of securities certificates of such ownership; its work would be finished. For by the supreme legislative act of the people the holders of these certificates constitute a body corporate. What a corporation is, is well known, and this corporation would differ from other corporations in no respect, except as provided by the constitution itself. That instrument defines the life of the corporation to be "forever"; that is, until the people by their like supreme legislative act terminated its existence. Likewise the instrument of its creation defines and confines the business of the corporation, "exclusively to transport persons, commodities and messages within the United States and between the ports thereof." The instrumentalities which are thus brought together under one control, are such as are at present engaged in the transportation of

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persons, commodities or messages, except such as are exclusively urban and *such other as congress might exempt from the operation of the amendment.*

The purpose of this exception is obvious. There are now, and always will be, certain kinds of transportation which are not of a sufficiently public nature to make it desirable that they should be brought into the list of transportation facilities of a distinctly public nature. There are not a few railways which are quite private in their nature, and there are many kinds of small craft likewise engaged in private ventures. Also, there may be parts of the country the people whereof might think themselves not satisfied with the facilities provided them by the action herein contemplated. Likewise, it might be considered desirable to exempt certain kinds of communication, as wireless telegraphy, etc. The main purpose is to bring under conjoint ownership and operation the chief facilities of transportation as we understand them to-day, and therefore a residuum of authority should be left in congress to exercise its discretion as to such as should be excepted. It is hardly likely that this would be the subject of abuse.

If it be true that no man can serve two masters, it is equally true that no transportation company can serve the public and itself at the same time. It cannot be engaged in a business in which it comes into competition with other producers.

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If it does, it is but human nature to serve itself cheapest, and if not cheapest, then best, and if not best, then, at least, first. As the very soul of the transportation business is absolute impartiality to all its patrons, it follows that it cannot engage in any other business whatsoever except transportation and, of course, the incidents thereof.

Unification of rail and water transportation

Scattered through this book may be found sundry paragraphs on the subject of destructive competition among corporations engaged in the transportation business; the origin thereof; the abuses to which it has given rise; the means which the companies have taken to abolish it; the laws of congress and the states to force it; and the final result—the virtual amalgamation of the roads.

Many there are who see clearly the impossibility of competition, in its ordinary sense, among railroads, who see equally clearly the ultimate union, in some form, of all the facilities of land transportation; yet who will be shocked by the suggestion that it is quite as important to unify and harmonize water and land transportation as it is the latter. Doubtless one of the main incentives to the building of the Panama Canal is that of maintaining active and continuous

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competition between the Atlantic-Pacific water route and the American trans-continental railways. Doubtless, too, the only reason for the present agitation for the re-opening of all the rivers of the country to navigation, and for the construction of a grand system of canals, is that such improvements will perpetuate the ancient quarrel between water and land transportation. There are those whose hostility to the railways is so pronounced, that they would not hesitate to bring to bear upon them for their destruction, the power, wealth and resources of the United States. In all this the conception is ever present and predominant, that the only competent regulative force to be brought to bear upon the industries of the world is competition. This is a venerable and venerated idea, and one which has so completely occupied the field of thought that its complementary idea has been almost banished.

Many times have students as well as practical workers, pointed out the limitations of this happy plan for regulating the industrial affairs of man. Many times have they shown that it is applicable only within narrow bounds to industries having large fixed charges. Yet so justly distrustful are the people of monopolies resulting from the elimination of competition, that they see no way or hope of controlling combined industries except by their absolute prohibition by law. I cannot hope to add anything to the reasoning

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of those who advocate the necessity of combinations to regulate the prices at which certain industries should sell their products; nor do I fail to realize the baneful influence of monopolies. My purpose is to do what I can to reach a higher view point—a point from which we may be able to see our transportation system as the people's greatest friend and not, as at present, their enemy to be crippled or destroyed by the hands it should most help.

If transportation is to be a monopoly, as, in the nature of things, it must be, then make it a legal monopoly, not an outlaw. Support it as becomes its dignity and in order that it may become in the highest degree helpful, and then demand of it implicit obedience to the law which created it. Happily, we are in a much better position to do this as to our transportation system, than as to other industries; for already the public mind is educated to regard it as a semi-public, if not a public instrumentality, and the system itself has bowed to that view of its existence. Nothing then remains but to devise the means by which it may become the helpful friend and servant of all.

But no half way means will suffice. No good can come from harmonizing the relations between the facilities of land transportation while leaving them in open hostilities with another great servant of the people—water transportation. Least of all

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can the nation serve itself by building up a great system of water transportation to engage in an inevitable war with land transportation. For one of two things must result; these two systems will combine into an uncontrolled monopoly or they will fight till the weaker dies. If laws be made prohibiting their combination, then prepare for universal bankruptcy. From a financial standpoint, this nation could better afford to have a foreign war. But the pity of it is that an intelligent nation should set its two great servants to battle, and be itself financially crippled as the outcome of the struggle.

From every side, in the books of learned writers, in the cases before courts and commissions, in investigations before legislative bodies; do we hear the excuse for wrong railway practices that the railways have to do them because they have to meet, or are threatened with, water competition. If the people to the east of the Pacific seaports, complain that they are compelled to pay through rates to those ports and local rates back to their towns; the justification of the railroads is that they have to meet water competition. If the people of the South complain of outrageous discrimination nearly everywhere, the railway's excuse is that it has to adjust its rates to meet water competition. If Chicago complains that the railway gives Eastern merchants better rates into certain Southern territory than it receives

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while much nearer, the same old justification comes to the surface—water competition. So when St. Louis bitterly complains that it is robbed of the advantages of its geographical position by low railroad rates from Eastern cities, the answer is,—water competition. And now note, that competition between land and water transportation is never made the excuse for any good thing; it is always the excuse for the defense of a bad practice and a justification for its continuance. No one ever complains that water carriage is not a good thing in itself; the trouble is that it is always made the apology for injustice and discrimination on the part of the railways. Above all things my contention is, not that the benefit of water transportation be taken away, but that its existence shall no longer be the excuse for the perpetuation of railway outrages. This can be accomplished in no way except by the union of rail and water carriage under one control. This we dare not permit *uncontrolled*, by reason of our just fear of the transportation monopoly which would result.

What would be the effect of union of rail and water transportation under the control outlined in this book? We are so unaccustomed to think of all means of transportation being under one control and non-competitive, that at first the question seems difficult of solution. If, however, we alter the question and ask: Under given

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conditions by which kind of transportation can the people be best served, the answer seems naturally enough: If by water, then it should be by water; if by rail, then it should be by rail; if by both water and rail, then it should be by both.

The persistence of water carriage, notwithstanding the drastic competition to which it has been subjected by the roads, which often carry the same kind of freight at a loss, is conclusive evidence of the fact that there are certain kinds of freight that boats can carry more economically than the railways. Where water transportation exists, this sort of freight naturally belongs to it. It consists of certain kinds of heavy freight not seriously affected by water carriage, and where speedy delivery is not important. The shipper should have the right to have that sort of freight carried by water at a reasonable profit to the carrier. If the shipper desires to send it by rail, he should be required to pay a higher rate. This would doubtless cut the railways out of some business. But it must be remembered that under the system herein outlined, all profits from all sources of transportation go into the same treasury; so that the loss on one side would be made up by the profits on the other. It is the general system which is to be made to show a profit and not of necessity each particular part of it.

If the seaports should complain that the effect would be to make them pay higher rates by rail

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the answer is, that they should be compelled to pay the same rates by rail that the rest of the country does. They can not have added to their natural sea advantages—which they retain—artificial advantages, which they have had at the expense of interior points. It is time the water towns contributed their just share to the support of the country's transportation system.

Against this plea for harmonious relations between land and water transportation, the only answers are the fear of the monopoly which would result, and the outrage which would be imposed upon American citizens by depriving them of their God-given right to engage in the coastwise, lake and river carrying business. But are you so sure that the very monopoly which you so much fear, and the substantial deprivation of American citizens of their right to engage in this occupation are not now accomplished facts? Do not imagine for one moment that the only weapon with which the railway has fought water transportation to a standstill is low railway rates between places where water carriage exists. On the contrary the railway has chiefly fought and largely conquered water transportation by engaging in it. From Boston to New York, from New York to Savannah, to New Orleans, to San Francisco, to Puget Sound, coastwise transportation is controlled by the railways. And wherever there is a navigable river of sufficient consequence to seriously

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interfere with the railway monopoly of traffic, water transportation on that river is controlled by the railways.

Look at it broadly and ask yourself if it is reasonable to suppose, that the twelve to eighteen billion of dollars invested in railways would be likely to lay down its hand before the puny investments in water carriage?

“But,” you say, “if water transportation is controlled by the railways then how can there be competition between them? Why do not the railways raise the price of water carriage so that it is no longer a competitor with carriage by rail?” And the answer is: Because water carriage, where there is found fifteen feet or more of water, is so much cheaper than railway carriage that the railways engaged in water carriage cannot raise the rates without bringing upon themselves competition by independent carriers by water. They put down the price of water carriage themselves to drive out the independent carrier or force him to railway terms, and they cannot put the price up again without surely inviting a renewal of the competition. Thus they have established a practical monopoly of water carriage, and at the same time, and by the same act, have practically banished the independent water carrier from the water. Moreover they have made the threat of water competition the excuse for a score of bad practices, such as have been already set forth.

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If, therefore, the only objections to the consolidation of land and water transportation are, that a monopoly of transportation would thereby be created and that the right of our people to engage in coast and inland navigation would be limited, then the objections are answered by the facts, that such a monopoly exists to-day and that the rights claimed have been practically destroyed by the existing monopoly.

What a world of difference it makes to people how their rights are destroyed! They sit supinely year after year seeing their individuality continuously abridged by the growth of industrial corporations, yet they howl themselves hoarse in denunciation of a natural law, the operation of which they are as powerless to stay as they are the movements of the tides. The simple fact is that monopoly is the perfectly natural—or shall I say unnatural—result of successful business methods. Just as the human race has evolved by the survival of the fittest with the consequent elimination of the unfit, so industries have grown and developed by the survival of such enterprises as adopted the business methods best calculated to accomplish those ends, with the elimination of such as do not adopt them. And this inevitably leads to monopoly. The employment of successful business methods leads certainly to the absolute control of the industry upon which they are brought to bear. So long

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as industries were carried on by individuals, the tendency to monopoly was checked by the death of the individual, but with the introduction of the deathless corporation that check has ceased to operate. The continuance of the petroleum monopoly in the United States is not in the slightest degree dependent upon the life of any of its heads. Its continuance is embalmed in its business methods—the most perfect of their kind in the industrial world.

Seeing then that monopoly is the natural result of the continual employment of successful business methods, what is the wrong in it? Surely it is not the employment of the successful business methods which is wrong. The wrong consists in the simple fact that the attained, incorporated, industrial monopoly is a conscienceless *inhuman* hog. It is the natural human hog plus the corporation, which makes it an inhuman hog. And yet this is exactly the *thing* which is to control the industrial affairs of the world in the future.

Strange to say, it was from a Standard Oil man that I heard the best remedy I have ever heard for the evil of an industrial monopoly. Premising his conclusion by the remark that the monopoly is the inevitable consequence of the employment of economic methods, he said: "The only remedy against the exorbitant prices of an established monopoly is for the state to take its profits by taxation above a reasonable

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percentage, and redistribute them among the people as expenses of government." Whether or not this is the correct solution of the problem, it points strongly to the fact that in attempting by law to prevent the existence of monopolies we have been hammering at the wrong door. We cannot expect to kill monopolies unless we destroy economic business methods. The thing to do is to eliminate their capacity for working evil. This may be done mainly in two ways: by limitation of their capitalization to actual values and by a taxation upon excessive profits. The railway being a semi-public industry we accomplish the second end by a limitation of its charges.

Thus it is not the transportation monopoly resulting from the consolidation of transportation facilities which we need to fear, for with the attainment of the monopoly will come economic methods. What we need fear is, that the accomplished development of the transportation monopoly will be followed by certain abuses which characterize monopolies in general. The remainder of this book is largely given over to the suggestion of means whereby the good of the monopoly may be retained and the harm prevented.

V. THE BOARD OF DIRECTORS

Ownership representation

The corporation created as herein set forth, and

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engaged in carrying on the transportation service of the country, would be managed by a board of directors like any other corporation. But there would be a wide and all-important difference between it and the railway corporations which we now have. At present they are managed by directors elected by, at most, a bare majority of the voting stock, which, in practice, is nearly always a minority of the total stock and very often a small minority, while only from three to twenty per cent. of the total invested capital has any voice whatever in the management of the investment. Under the proposed corporation, every dollar of invested capital would be evidenced by corporate stock, and every dollar would have with every other dollar an equal vote in the election of the board of directors whose immediate business it would be to care for the affairs of the corporation.

It may as well at once be admitted and for that matter alleged, that the contemplated corporation would be in effect a mutual society, the sole duties of the directors being to manage its affairs in accordance with the law. If objection be made to the mutual character of such a corporation, then, I ask, what in the contemplation of the law, and what in the spirit of its undertaking, is any corporation except a mutual society; the managers of which, in strict accordance with the law, manage the corporate business solely

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in the interest of the shareholders? To exhibit surprise at this question is to show how far we have drifted away from conceptions of common honesty in our expectations concerning the managerial control of our corporations. So accustomed have we grown to the speculative aspect of corporate operations—to corporations controlled by and in the interest of pools,—that we have come to look upon those who manage their affairs as holders of positions vesting in them the right and privilege to make profits for themselves, not enjoyed by, and often at the expense of, stockholders. To imagine the existence of corporations in which directors and executive committees have no interest beyond the interests they are appointed to subserve and conserve, is to stretch the imagination, indeed. The overwhelming majority of the owners of railway securities to-day can only guess what the next move of their boards of directors is to be, and gamble on it and its results. If you do not believe this, go with stock in your hand as evidence of your rights as a stockholder to the managerial powers of any of our railways, and seek information as to any matter whatsoever concerning their plans to be made, in process of making, or completely made, and you will be regarded as an impertinent ass. Remember that the demand for publicity in corporate operations is of very recent date, and that until recently no information was ever given out except just

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such as the directorate was willing should be known. And now note further that the excuse of directors withholding information from stockholders is, that their competitors may not know their secrets; thus making competition chargeable with one more corporate abuse.

If it be further said that the management of mutual societies is not above the criticism bestowed upon the ordinary corporation, that the directors of mutual societies also use their offices for their personal profit; the answer is first, that it is not generally true and, second, if it were it is largely the fault of the law. The law should require the officers of all mutual societies to make frequent full and detailed reports of the affairs of their corporations to a *court*, the same as executors, administrators, guardians and other trustees are required to make, and these reports should be subject to challenge by any interested party. Such reports would be a hundred times more effective in the prevention of wrong doing, than the cursory examination of their affairs by a political administrative appointee.

The objection of corporations to publicity is largely unjustified. Let the private individual keep his secrets, or tell them to his wife, his priest and his banker, when he wants to borrow money from the latter. A corporation which goes into the general public market and asks the public to loan it money, as it does when it offers its securi-

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ties for sale, can have no secrets which that public is not entitled to know. By inviting the public to participate in its enterprise, it has assured the public that it neither has nor will have any secrets. Such a corporation, so managed, I would have the corporation which conducts our transportation, which must rely upon the public to furnish it the means for its support.

The duties of directors

Let us begin the enumeration of the duties of the directors of our far distant corporation by a statement of some of the "duties" which would not fall upon them. These may be selected quite at random from among the "duties" they now perform.

The directors would not loan the money of their stockholders to themselves, with or without good security.

They would not contribute the money of their stockholders to political parties, in exchange for protection for criminal practices.

They would not use the money of their stockholders to make or unmake markets for the benefit of their executive officers.

They would not hold back the declaration of dividends until they had bought, with their own or their stockholders' money, as much of the stock of the corporation as they thought they could

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sell to the public on the rise which would follow the announcement of the dividend.

They would not be interested in construction, improvement and other companies, by means of which they could contract with themselves for all work done for the corporation and materials furnished to it.

They would not borrow money with which to pay unearned dividends, by means of which to boost their stocks.

They would not be interested in banks, or underwriting syndicates, to whom they sell the bonds and stocks of their corporation at large discounts.

They would not declare stock dividends and issue watered stock to themselves, at their own sweet will.

These are some of the duties they would *not* perform. In short they would not make the transportation system of the country their own private plaything. But they would have plenty to do. To convert the entire transportation system of the United States into one harmoniously working organism, to the end that all the people might be served impartially and economically and to the best advantage possible, would call forth the highest order of organizing genius. No man lives to whom that undertaking would not be an honor. If the directors would not have the power to wreck old roads or build new ones to

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their personal advantage, they would still have the duty imposed upon them to devise means whereby the existing system would be made safe and extended to meet the requirements of the country; and having so devised, to petition the court for authority to put their plans into execution.

These directors would have the receipt and disbursement of two or three times the total revenue of the federal government. But be not alarmed at that. The same power rests to-day in a thousand or so boards of directors scattered through the several states, and, for the most part, without a shred of control over them. Instead of having to watch ten thousand possible rascals you would have to look after only ten. And it ought to be the law that any official of a corporation who enters into any contract, or has any transaction, on behalf of his corporation, from which he does, or might, obtain a financial advantage for himself, should be guilty of a crime. The officers of corporations should no more be personally interested in the contracts they make for their corporations, than the judge on the bench in the suit he tries.

But of course, not only the board of directors but the subordinate officers under them should, of necessity, be vested with large discretionary powers. A great corporation cannot be conducted on the bureaucracy plan. But a thousand

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questions which now bother those engaged in the transportation business would be laid away forever.

If rates were uniform and discrimination of all kinds wiped out, a large percentage of railway work would be rendered unnecessary. With the change of the railroad from a speculation to an investment, would, of necessity, go all the nefarious work now devoted to the stock exchange aspect of railway corporations. The essential financial duties of the directors and their aids would consist in the making of rates so that the revenue of the corporation would be sufficient. Primarily, this duty would devolve on the directors subject to the disapproval of the court if it were not performed in accordance with the law.

In every affair of this life trust and confidence must be lodged somewhere. No scheme was ever yet devised which would prevent one who has access to a cash box robbing it. What has been here proposed has nothing much to do with the till-tapper. It attempts to dispose of the gentlemanly thief,—the man who under the disguise of the railway trustee, systematically plunders his corporation, his stockholders and the public.

Would individual incentive be destroyed?

This is a matter of very great importance. Surely the man should be put into jail who would

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dare suggest anything which would diminish the American's incentive to accumulate dollars for himself, even at the expense of the public welfare. Well, it must be confessed that this scheme would diminish the incentive to some extent, albeit, I surmise, along the line where it could stand dwarfing without material loss to the nation. It is quite true that there would no longer be any incentive to the promotion of railway construction based on the financial idea of borrowing the money to build railways and taking the stock as a promoter's bonus. Likewise, the motive would be absent which promotes the purchase of a railway by individuals and the sale of it to a corporation for three times its cost. Likewise, the incentive to the formation of improvement and construction companies by the directors of railway corporations, whereby they contract with themselves, at whatever prices their conscience will permit, for the building of their corporation's road, would disappear. Along with this would go the incentive to a railway manager to be a member of a banking firm, or syndicate, which takes the securities of his railway corporations at discounts and sells them to the public at a profit. Likewise, sundry other incentives to railway making of no less laudable character would no longer find scope for action.

Is it possible that we have fallen so low that we can no longer conceive it possible that men

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will engage in enterprises which do not hold out the hope of illegal gain? Or shall I put it otherwise, and ask if the savings of the masses are to be forever used by the rich to make themselves richer? Will railroad making cease, because the people who promote railroads are not allowed to use the peoples' money to make a dollar for them for each dollar borrowed? And must they, for the encouragement of their most valued incentive be allowed to continue to capitalize the growth and development of the country, turning it over to themselves in the form of \$31,000,000 stock dividends?

I do not know that I can make myself clear on this subject, but I should like to inquire in whose fertile brain the conception first found growth, that it is the special life-function of the stock jobbing capitalist to make our railways for us? Is it not rather the business of the great civil engineer than of the capitalist to do these things? Why then has the mere man of money been placed at the head of our railway enterprises? And is it not possible that we could find great engineers to devise our railways for us in the future? What special wisdom does the mere moneyist possess, that this great undertaking should be turned over to him?

What, in very truth, is transportation more or less than the carriage of us and our products from place to place? And is not every bit of

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this done by men who are employed to do it? What part do any of our so-called railway kings take in the actual operation of our transportation system? The part they take is the financial part, and that being provided for, their places would be vacant. What would be needed at the head of such a transportation system as is herein contemplated, is a great executive engineer, just such a man as is now in charge of the operating department of every great railway in the United States, drawing his salary of \$20,000—\$50,000 per year and earning it. The president of one of our largest and most successful railway systems is a comparatively poor man. It is only by reason of the financial demands of our railway systems, that certain men called great railway men have been found useful. In the clash and interclash of railway interests, these men have filled their places. Under a non-competitive system they could be dispensed with. Their services have been devoted to the upbuilding of particular railway systems, not to the making of a transportation system. To make a transportation system requires a different order of genius from that required to make a particular railway system.

In what I have above said, I do not mean that it should be inferred that some of our railway men have not been great civil engineers in the sense in which I have used that expression. On the contrary, men who have been prominent in

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that part of railroading which has had to do with its financiering, have told me that their chief delight was found in the construction and operating departments. They were real lovers of the railway—men who delighted to see their railway enterprises pushed on and on into new territories, and who loved to see their roads developed to the highest point of safety and efficiency. That men of this stamp could not be found to take in charge the development of a transportation system for the United States, is unbelievable.

I hold no brief to say good or ill of any man, but it cannot be doubted that there is at least one man in the United States to-day who is possessed of supreme railway genius. I have not the slightest right or authority to say so, yet I cannot doubt that Mr. Harriman would consider it the greatest honor that could be conferred upon him, to be placed at the head of a board of directors whose duty is should be to organize a transportation system for his country. The pity of it is that in this country, the ablest men are practically debarred from taking any part in public affairs, while to accomplish their purposes, vicious laws force them to adopt means repugnant to them. Perhaps the day will come when as a nation, we will avail ourselves of the ability of our great men.

The proposed plan and government ownership

It may have been suspected that this proposed

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transportation corporation would be in some way under the control or management of the federal government; that the affairs of the company would be subject to the direction or interference of some government bureau. Nothing could be further from the mark. The corporation is placed *under the law*, not under the government, and the distinction thus made is as wide as it is possible to make it. The government would not own a share of stock in the corporation, nor would the government have any official of any sort connected with the corporation. The corporation would be distinctly private, but distinctly responsible to the law of its creation.

Nothing, in my opinion, would push us with greater momentum in the direction of imperialism, than ownership of the railways by the federal government, or the creation of the double-headed monster which would come with the federal ownership of trunk lines and the state ownership of railways operated within states.

The chief objection to government ownership and operation of railways is not that it would impose a public debt of many billions on the people, for that debt would be amply secured, and the interest paid from the receipts. Nor is the chief objection the relative inefficiency of government, as compared to private administration of such an enterprise, though that is serious; for it is an undoubted fact that what is every man's

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business—to wit, the public's—is no man's business. In which aspect there is but little use to compare European experience with what ours might be. For in Europe, and especially in all countries except England, people have been for ages accustomed to military obedience. The people in this country have not been so accustomed; it is undesirable that they should ever become so, or that they should ever look to the central power as the director of their actions.

There are two main objections to government ownership of railways in the United States. One is largely incident to the nature of our political system, and the other is world-wide. As to the first, it so happens that each representative in congress is especially the representative of his district. A most pernicious custom prevails of carrying bills through congress by the swapping of votes. The result would be that each representative, to curry favor with his constituents, would favor the building of new roads up every blind alley in his district, and by the interchange of votes could do so; as is only too apparent in certain legislation, especially concerning appropriations, at present. Then again the constant tendency of American politics is to the establishment of a machine, and government ownership of railways would change them from a plain business proposition into a high political machine. No matter how much appointments might be

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hedged about by civil-service enactments, nevertheless the appointing power and its equivalent, the power of removal, must rest somewhere. The president would use it as he does and has in time of stress, to curry favor with the senators. The senators, to hold offices, would, as they do, take into partnership the representatives in congress and the members of the state legislatures. They, in turn, would take into partnership the ward politician, and the railroad employees would support the machine in order to hold their jobs, and get better ones. A machine of this kind once built up, and sustained by the ultimate million of government employees, to which would be added at least four million more government employees, when our railway system is complete, could not be overthrown.

Lastly, and this reason is world-wide, in the hands of an unscrupulous and over ambitious president, American Institutions might be put to the test. It will not do to trust too much to patriotism against self-interest. The ideal government is one which does not permit self-interest to be arrayed against patriotism. Besides the people are much to blame. There is a tremendous class of unthinking people to whom a president who has served, or appears to have served, well becomes a sort of hero. They demand that he be kept in office. To them a third term is no menace to American Institutions. It is but a

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step from a third to a fourth term, and a lesser step to life. Given an unscrupulous but popular president, and with the political machine behind him and a foolish populace demanding him, the day of America as a Republic is past. That this is not idle talk is seen at the present time, when it took all of Mr. Roosevelt's firmness to keep a third term from being forced upon him. If he had been unscrupulous as well as ambitious, then what?

VI. WHAT PERCENTAGE ON INVESTMENT WOULD BE REASONABLE?

Why capital invested in transportation should have a fixed return

In a former portion of this volume, I asserted it as a prime principle governing the relations between the people and their transportation system, *that it is as much the duty of the government to see that the capital invested in transportation receives a fair return, as it is to see that it receives only a fair return.* Or, to put it otherwise, the right of the government to limit the earning power of the railway is the complement of the right of the railway to at all times charge rates which will support it.

Obviously simple, honest, just, and equitable as this claim seems to be, it will doubtless be

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disputed by nine men out of ten, and among the nine will be all the great thinkers on economic questions. These great thinkers are great sticklers for the unlimited application of the law of supply and demand. They exactly overlook the fact that the law of supply and demand, in the fixing of prices, can have no application to an industry the earning capacity of which is limited by the arbitrary fiat of the government. If railways were permitted to make their rates high in flush times, they could correspondingly lower them in dull times. By this means they could accumulate a surplus in good times which would tide them over bad times, just as any other well conducted industry does. But this the railways are not permitted to do; with the result that they are theoretically forced to violate the economic law above referred to. Theoretically, when traffic is light railways must charge higher rates than when traffic is heavy. The obverse of this would be true under natural conditions, that is, railway rates would fluctuate with the fluctuating prices of the commodities they carry, as well as with the prices of labor, money, and all else which enters into the cost of conducting transportation.

The right of the legislative authority to fix maximum rates above which the railways may not charge, is a crystallized idea. But the courts have uniformly held, that the rates made by the legislative authority must not be so low that the

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railway is deprived of its capacity to earn its operating and maintaining charges and a reasonable return on its invested capital. This is tantamount to an admission that rates may *at all times* be charged which will produce these results. This is exactly the equivalent of a public guarantee that the railway may always earn a certain, though indefinite, return on its capital. It is indefinite solely because the legislative authority has never yet determined what return would be reasonable. What I ask to have done is, that the supreme legislative authority shall now determine what certain income the railway is entitled to earn; in other words, what percentage, or interest, or dividend the capital invested in the transportation system is entitled to earn.

At the outset of this inquiry the question presents itself: Why should the capital invested in transportation be guaranteed a fixed return? There is no such guarantee as to industries in general. The money invested in the banking business has to accept such rates of interest as the law of demand and supply permits. Manufacturing concerns make profits or no profits according to the state of the trade. Sometimes the farmer makes money, and again his crop sells for less than it costs him to produce it. Why should the carrying trade be exempt from this law? On inquiry, we find that the railway is not the only industry

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which has this guarantee. It applies practically to all quasi-public industries—to corporations supplying the public with light, water, street-car service, and the like. As to none of these, may the legislative power reduce their charges so low that they may not earn a reasonable interest on their invested capital.

There are two reasons for this. The first is the one given at the head of this section. Common justice dictates, that the right of the state to limit earning power is the correlative of the duty of the state to guarantee the right to earn a fair return. The other reason is *the reason of necessity*. Without this guarantee we would not have the railway. No one except a lunatic would put his money into a venture which the state claims the right to make worthless.

But the right to earn a fixed income is not only justified by the dictates of common honesty and the law of necessity; it is justified likewise by the highest principles of business prudence. *Transportation is the common servant of all the industries*. Without it they are nothing. It is this unique position of transportation in the activities of life—this position of common servant to all—that makes its support a simple proposition of business prudence. The railway does not exist for itself, it exists exclusively for others. Though it adds to the value of what is produced, it is not itself a producer. Though an enormous con-

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sumer, it consumes only to give it the capacity to serve. It is nothing but an intermediary between producer and consumer. It adds to the value of production, and everywhere lessens the cost of consumption. If common sense cannot induce producers and consumers to support the industry upon which they both depend for existence, no refinement of argument can do so.

I am tempted to give yet another reason why the capital invested in transportation should have a fixed return, though in doing so I am not unaware that I am treading on dangerous ground. The whole world, but more especially the whole American world, is very rapidly undergoing a most remarkable industrial change. It is a change from the individual to the corporation. With the exception of the agricultural industry, men are very rapidly losing their individual industrial existence, which is being merged into corporate industrial existence. It is not with this, but with the result which necessarily flows from it, that I am now concerned.

The wealth of the world is rapidly transforming itself into the form of corporate securities. With the disappearance of the individual as an independent producer, is passing away the opportunity of the individual for the independent investment of his savings. About all the choice which he has is to deposit his savings in a savings bank, or to invest them in the securities of corporations.

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To what extent is the government charged with the responsibility of seeing that the securities in which its people invest their savings are worthy?

The old school of thinkers, with the teachings of which I have been saturated from youth, will say, *caveat emptor*—let the purchaser beware. If he gets swindled it is his own affair. Men's wits have grown by being swindled: that is the only way the human race progresses. It is no business of the government to supervise investments. But for myself, I am not so sure of the validity of this argument as I once was. A principle which may be very applicable to a horse trade, may fail when applied to the billions of complicated securities which constitute our corporate wealth, and form practically the only investment for savings. Even the wise investigator who takes plenty of time and employs all available means, finds difficulty in deciding upon the merits of these securities. What chance then has the poor fellow who in the end would know nothing about them, if he spent a lifetime in an attempt to fathom their mysteries? It, therefore, occurs to me, that about as little as a government could do, would be to compel corporations to make at least a *prima facie* showing of honesty in their securities, before they floated them upon the public. But, however that may be, one result would follow the transformation of our railway corporations as herein contemplated:

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There would be billions of dollars of simple, stable first-class securities in which the people could invest their savings without the fear of being robbed overnight, and at the same time the investment would subserve the highest industrial purpose that I know of—the making of a first-class transportation system for this country.

The Stock Exchange and values

In view of the somewhat radical views which I have rather freely expressed, it will doubtless seem strange that I have not broken loose on the New York Stock Exchange. The reason for my not having done so, is because I do not think it deserves a tenth part of the censure it receives. I have already said that it is a market for securities, not a manufacturer of them. What is it that gives value to anything? It is the simple fact that there is a market where it may be sold. Without a market, nothing which cannot be used as food or for warmth has any value. If the Exchange were closed even temporarily, values would fall enormously. If it were permanently closed, most of our industries would be soon seriously crippled, if not actually driven out of business. People ought, therefore, to think twice before they speak of interfering with the operations of a free market, not to mention closing it as some of our political agitators would do.

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It is, however, with what is commonly called "market manipulation" that we are here interested. Manipulation is made possible almost solely by reason of the inherent instability of securities. Securities which have a fixed and certain income, are governed in price almost entirely by the value of money, that is, its earning power at any particular time. It is the play upon hopes that makes manipulation possible, and there can be no considerable play upon hopes, when the security is known to be absolutely good and to have an invariable income. If it is desirable to stop manipulation, the way to do it is to make securities stable,

Next, given even fair stability, the most important preventive of the creation of an artificial market is the quantity of the security. Of course, in these days of gigantic financiering, a hundred million dollars is no great affair. Nevertheless it is true that the securities of corporations having relatively small capital stocks, are much more easily manipulated than those having large issues, simply because the larger the issue the more money it requires to control the market. Other things being equal, the larger the capitalization of a corporation and the more widely its securities are distributed, the less likelihood there is of attempted manipulation. And if the issue were large enough and the security stable, manipulation would be quite impossible. If, for instance, there

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were fifteen billions of uniform stock of the American Transportation Corporation, with a fixed earning capacity, I think it unlikely that any man, or any set of men, would be crazy enough to attempt to move this enormous mass of securities.

I do not claim that there would be no oscillation in the market value of such securities. I am speaking only of their artificial manipulation. Under normal conditions—that is, in the absence of wars, panics, and catastrophic events, such securities would be expected to move only with the changing value of money.

This much being said in favor of our transportation corporation's stock being given a fixed income, let us next inquire (1), what authority should determine what the rate per cent. of income should be, and (2), what rate should be reasonable and fair.

What authority should determine railway income?

As to the authority which should determine what percentage of income the capital invested in transportation is entitled to receive, three suggestions present themselves, to wit:

(1) It might be left to congress to determine from time to time.

(2) It might be left to a court to determine yearly, or at stated periods.

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(3) It might be determined by the supreme legislative act of the people.

In my opinion, for every reason which appeals to me, the authority which should determine this matter is the people, and it should be expressed in unmistakable language in the act which creates the corporation. The rate per cent. should be fixed in the constitution, not by any words which can admit of interpretation, not by loose language to be buffeted about by different courts, nor by any such vague and uncertain phrase as "that the capital invested in transportation is entitled to a fair return," but by an explicit statement of the exact percentage to which invested capital is entitled. And for every conceivable reason, it should not be left to either congress or the courts to determine this matter.

If it be left to congress to define from time to time what the rate per cent. of income should be, that simply means that the whole railroad question is to remain a political canker. Demagogues will live on it. If it is left to the courts to determine what income is fair, we will have as many different opinions on it as there are courts. Past experience with the courts on this question is not favorable to the continuance of their authority. It is well known, that some courts have held that even 10% is not an unfair income.

But the supreme reason why the determination of this most important question should be left

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to neither congress nor the courts is, because it would destroy that fixedness of character of railway investment from which so large an advantage over present methods may be expected. To leave to either congress or the courts the power to fix the rate per cent. of income from time to time, would be to perpetuate gambling of the worst kind: for it would then be gambling on the decision of courts or congress. A raising or lowering of the rates by congress, or the courts, would mean the making or the loss of hundreds of millions of dollars. The door would be open for such scandals as we have not dreamed of. A change of even one per cent. in the rate of interest, would mean a change of values of from three hundred to four hundred millions of dollars. And this could be accomplished overnight, by the decision of the court or an act of congress. Better the ills we have, than flight to such as those. No, whatever the rate, it should be fixed and certain, and this can be accomplished in but one way, by making it a part of the supreme legislative act, the constitution.

Further consideration of this matter will appear under the next heading.

What the rate per cent. of income should be

Presuming that the rate per cent. which the transportation corporation should be allowed

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to earn and pay on its invested capital is fixed in the organic act creating the corporation, what should that rate per cent. be? It should conform to three principles:

(1) Justice to the public, to which transportation is a necessity.

(2) Justice to those who have invested their money in transportation, or who may do so, for the benefit alike of themselves and the public.

(3) The rate should be such that the American transportation security would command the investment market of the world.

What would be justice to the public? You cannot answer this question under present conditions, with the same persuasion that you could if we were working under the proposed plan. While, theoretically, railway corporations are permitted to earn a fair return on their investment, yet at the present time the amount and character of the investment are so doubtful as to permit of nothing less than continuous agitation as to what a fair return should be. At present we are constantly met with such apparently valid arguments as these: Why, in the nature of things, should the transportation business pay less than other industrial enterprises? Is not the business as precarious as that of manufacturers? Does not the railway show a larger percentage of bankruptcies than almost any other business? Does not one-half the capital invested in it go starved

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all the time? What industry is there, the net profits in which are so low as in the transportation industry?

To all of these apparently valid arguments we reply: Under the proposed plan, it is purposed to make the railways' rights in practice what they now are in theory. We purpose to give you a fixed income, guaranteed by your right to at all times charge rates which will produce it. Thus your business will lose its precariousness; bankruptcies will be impossible. The security will be the best in the world. Under such circumstances, justice to the public demands that it shall borrow capital at the best price it can, consistently with the two other principles above mentioned. Obviously, this best price is about the average current rate of interest in the investment markets of the world.

What is justice to those who have invested or will invest their capital in transportation? As to those who have in the past loaned their money to the railways at fixed rates of interest, justice demands that these contracts be carried out where they are free from the taint of fraud. It may be presumed that, in general, railways which have borrowed money in the past have done so on about the most favorable terms they could. As to those who have invested in the stocks of corporations, they have done so with the full knowledge that the people reserved the right to make

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their investments return to them only what is reasonable; which subject has been already fully considered. All that need be added is this: that while the people have the sovereign *might* to say what income these investors shall receive in the future, that is all the more reason why they should use that great power to work no injustice. The American people can never afford to do an act of injustice. "It is excellent to have a giant's strength, but it is tyrannous to use it like a giant."

What rate would command the investment market of the world for the American transportation security? This I apprehend is the most important question of all. After all is said and done, if you are a borrower, you must borrow on the terms of the lender; that is, on the market value of money.

There are two well-known facts which should be preliminarily stated. The first is that it is not so much the rate of interest which your security pays, as it is the character of the security and the market value of money at the time of the sale, which is important. Within certain limits, if the security is "gilt-edged" and money is worth, say 4%, the amount of money which came to you from the sale of the security would depend on the rate of interest which it paid. It would even up on a 4% basis. Under such circumstances a security paying 6% would probably bring you from 30% to 40% premium if it ran

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for a long period. Or if it paid 5%, it would bring you from 15% to 20% premium. Or if it paid 3%, it would have to be sold at a discount of from 10% to 15%. I mention these facts to disabuse the mind of the uninitiated of the idea that the rate per cent. is of such unlimited importance as it would seem at first to be. The extra amount of money which you get on the sale of a 5% security over that which you would get on the sale of a 4% security, theoretically compensates you for the payment of the extra 1% interest. If the security were absolutely safe and matured at a fixed date, this theoretical compensation would be realized in practice. But if the security had no fixed date of maturity, the theoretical compensation would not be so completely realized.

The other fact to which I desire to call attention, is the relation which exists between the *total* expenses of a transportation corporation and that part of the expense which consists in the interest and dividends, or returns which go to the invested capital. In the year 1906, the bare expense of operating our railway system, including taxes, was about 75% of the total expenses, while about 25% was paid out in the form of interest and dividends to invested capital or retained as surplus. In order to pay the *alleged* invested capital an average income of about 4%, it required about \$530,000,000 of the com-

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panies' receipts. If the rate per cent. had been 5 instead of 4, there would have been paid out about \$650,000,000 or say \$120,000,000 more. I call attention to this now to show that an almost infinitesimal advance in freight rates, of a little over one half of one mill per ton per mile, would have enabled the railway system to pay 5% instead of 4% on the invested capital.

Yet whether the securities were on a basis of 4% or 5% would probably decide whether or not they would command, at all times, the investment market of the world. If they were on a basis of 5%, there is little doubt that they would be looked upon as the best security in existence; if they were on a 4% basis, it is doubtful whether they would occupy any other than a commonplace position. Yet this comparatively trifling difference might be the means of saving us from a money stringency or a financial panic, in which billions would be washed away. They would be the greatest liquid asset possessed by any nation in the world.

If, therefore, we had in mind the benefit which would come to the country from the rate per cent. which railway securities should pay, it should be high enough to make them prime securities in every sense—prime in the sense of their ready salability in the markets of the world, and prime in the sense of affording greatest stability to banks and other institutions which would receive

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them as collateral for loans. Are we entitled to take this element into consideration in fixing the interest-bearing rate of the securities? Undoubtedly, if we are broad enough to look at the balance sheet of the whole country—if we are broad-minded enough to see how a trifling expense to the whole country may be used to return many times itself in profits to the whole country. I mention this more particularly, because I can hear the howl that would go up from every demagogic throat that these securities should be on a 3% basis.

I do not recall that there is any state in this country wherein the legal rate of interest is less than 5%. Will it be claimed that the money which supports the industry upon which all other industries depend, should earn less than the legal rate of interest?

It is not improbable that I am so devoted to the idea of a first-class transportation system and the entire stability of its securities, as opposed to the idea of a cheap system and one whose securities, are as variable as the winds, that I do not attach sufficient importance to the rate per cent. on the investment, or, rather, to the obtaining of the lowest rate on which we could squeeze through. Until recently, the constant tendency has been in the direction of lowered interest rates on good railroad bonds, but it must not be forgotten that this saving is more than lost by reason

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of the high dividend rates paid by the roads having the lowest interest bonds.

By many it would be thought strange that a proposition should be advanced for a uniform rate of 5%, when our whole system now pays only about 4%. But several facts of prime importance are overlooked, among them these: that the capitalization upon which 4% is paid includes at least three billion dollars of duplicated securities—the securities of the various roads owned by one another, that an inventory and appraisal of the roads would probably reduce their total capitalization from three to five billion dollars, and that the return now received on the actual value of the roads is much nearer 7% than it is 4%.

Redeemability of proposed securities

There is another question relating to these proposed securities which I may as well refer to now while I think of it. If any one has tired himself by reading this book, there will doubtless have occurred to him this query: When are these securities to be paid off or redeemed? And the answer is: they are never to be paid off or redeemed. But, you ask, does not that at once destroy their value? And the answer is: that there is, with an occasional exception, not a redeemable railway security in the world to-day,

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aside from American railway bonds, and it is that very character of our bonds which has led us into about ninety per cent. of our railway financial troubles. Not only are railway securities elsewhere not redeemable, but nearly one-half of our securities are not redeemable. Railway stocks have nothing of the redeemable character attached to them.

It is unnecessary for me to say to those familiar with the subject, that corporate stocks are *evidences of ownership* in the physical property they represent. They get added value from the fact that they live forever, not from the fact that they are ever to be paid off. Nor need I more than refer to the fact that even bonds which have their dates of maturity so distant that nobody ever expects to live to see them paid off, are much more favorably regarded than such as run for a short time only. As witness the fifty million 4% West Shore bonds, which mature January 1st, in the year 2361, and which are regarded as among the very highest-class securities in the market. These bonds run for 475 years from the date of their issue! So, even in the case of bonds, it is the certainty of the payment of interest coupled with the existence of a market (the condemned New York Stock Exchange) where they may be bought and sold, that gives them their value. Not, of course, that I mean that the security must not also be good, but the

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possession of a mortgage bond is no better evidence of ownership than the possession of stock, which is the direct and immediate evidence of ownership and, ordinarily, much more salable.

VII. THE REVENUE TO SUPPORT THE SYSTEM

What the support of a railway means

All through this work I have argued that a railway should be constructed and equipped as a first-class going enterprise by means of money derived from subscriptions to, or the sale of, its capital stock. Not only has this principle been persistently violated by the building and equipment of roads out of money derived from the sale or other disposition of their bonds, but the half finished roads thus built and equipped, have been put in a more or less finished condition out of income derived from the collection of freights and fares. Nor is that all. It has been the settled policy of American railways to devote a considerable amount of their income to the making of new and permanent improvements, or even to the construction of entirely new roads. This financial policy has even been the subject of much praise, because, it has been argued, it showed a conservative and economical disposition on the part of the roads. Instead of distributing their income as dividends to the full extent that they

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might have done, they have put their surplus income back into improvements, as they are called.

Nothing looks nicer than this scheme until you come to consider what it means; which exactly is this: the shareholders, instead of going into their own pockets for money to make their new improvements, have simply gone into the pockets of their patrons. They have charged higher freights and fares than would have been required to pay reasonable dividends, and they have covered up or sunk the excessive collections in new improvements, which have added to the value of their holdings. They dared not declare their excessive income as dividends, nor yet keep it as surplus; for in either case they would have brought down upon them legislation limiting their rates. So long as their accounts showed low earning powers, they did not fear legislative interference. Hence this surplus had to be covered up and the mode of concealing it was in improvements, which were generally charged to the operating or maintenance accounts. It must be remembered that it is only very recently that there has been any public supervision over railway book-keeping, if indeed there is any yet. However, that is not the point; which is, that this financial method has met with approval, and some of our best roads defend it.

But this practice is utterly without justification.

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It is the duty of the owners of a railway to build and equip it—to make it a railway in every sense of the word. It is then the duty of the public to pay freights and fares to maintain the road in as good condition as its owners made it and sufficient to cover operating expenses and to pay the owners a reasonable return on their investment. When these two accounts are balanced, the railway has done its duty to the public and the public has done its duty to the railway. For exactly the same reason, if the railway finds it beneficial to make new and permanent improvements adding to the value of the original investment, or to make extensions, its owners should go to the same source whence they got the money to build the road originally, and if these improvements make it necessary to charge higher rates the public should pay them. This is not only the ethical relation which exists between the public and its railway system, but it is as well the contractual relation. It is nothing more or less than a fraud on the public, for the railways to charge the public excessive freights and fares and sink the money in new improvements. They had exactly as well declared them in the form of dividends; for in either case the shareholders became the beneficiaries of money extorted from the public.

It is unnecessary to say that under the plan herein proposed, no greater freights or fares would be exacted from the public than would be

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required in the aggregate to operate and maintain the system, pay reasonable dividends, and keep a surplus against contingencies. If further capital were required for new and additional roads or improvements permanent in character and adding to the value of the investment, that capital should be raised by the sale of additional stock exactly like all other stock.

How the aggregate requirements would be ascertained

I regard it as a fact of first-rate scientific interest, that one may be able, a year in advance, to estimate, within narrow limits, not only the aggregate amount required for the support of the railway system of the United States, but also, within the range of the third decimal, the average amount which would have to be charged against each ton of freight carried a mile and each passenger carried a mile, to produce the required aggregate. Of course, I do not mean that the estimate would not vary from the requirement by a few millions of dollars. But it must be remembered that we are dealing with hundreds of billions of tons of freight moved one mile and hundreds of millions of passengers carried one mile, and that the aggregate of collections is upward of two billions of dollars. Still, utterly unforeseen events eliminated, the calculation could be made in advance with great accuracy.

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In the year 1906, the number of passengers who travelled on our railways was 797,946,116, and the average journey per passenger was 31.54 miles. If we multiply the number of passengers by the average miles of journey, we shall get what is called, in railway parlance, the number of passengers carried one mile, and this gives the enormous total of 25,167,240,831. For all the passenger service the railways received an aggregate revenue of \$510,032,583. If we divide this aggregate revenue by the total number of passengers carried one mile, we shall get the average price which the railways received for each mile they carried a passenger. This shows that they received two cents and three thousandths of a cent (2.003) per mile. Calculations after the same fashion show, that the railways received an average of seven hundred and forty-eight thousandths of a cent (.748), or nearly $7\frac{1}{2}$ mills, per mile for each ton of freight carried one mile, and the aggregate amount which the railways received in that year for carrying passengers and freight was, in round numbers, two billion one hundred and fifty million dollars. We do not know just what it cost the railways to do the transportation business of the country, because we do not know the amount of their total income which they sink in permanent improvements, but, accepting their figures, it would appear that it took, in round figures, one billion five hundred and thirty-six

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million dollars to carry on their business, not counting anything for income on the capital invested. They had sundry other sources of income, and out of this total income over and above the total cost of carrying on their business, they were able to pay to the alleged invested capital about 4% and have a reasonable surplus left over.

Thus it will be seen that there is no great difficulty in ascertaining in advance about the *average* freight and passenger rates required to support the railway system. But the most remarkable thing of all is, that if you take the average of railway charges over the ten-year period before (and including) 1906, you will find that the passenger rate per mile was 1.995 cents, or just eight thousandths of a cent different from that of 1906, and that the average freight rate per ton per mile was .756 cents, or just eight thousandths of a cent different from that of 1906. These calculations are based on the government reports, but if you will accept the probably more accurate calculations of Poor, it will be found that the *average* passenger rate for the ten-year period is exactly the same as that for 1906, and that the average freight rate varied from that of 1906 by only *one thousandth of a cent!* Considering the billions of tons of freight handled and the hundreds of millions of passengers carried in the ten years mentioned, it would seem unlikely that similar deductions

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could be drawn from any other department of human activities. They serve to show the marvelous equilibrium which has been established between the business of the country and the charges and expenses of railways.

But interesting as these facts are they are of no importance, except in so far as they show the average rates which must be charged to produce a given revenue for the support of the railway system. It is when you come to consider that these average rates (of freight) must be distributed and redistributed to apply to the ten thousand articles of goods wares and merchandise carried by our railways *over infinitely varying distances and under infinitely varying conditions and circumstances*, that you begin to get into the realm of railway mathematics. It is then that you approach the throne of the most august personage connected with the railway—his majesty, the traffic manager. The reason he is so important is because the duty devolves upon him to so adjust rates that his railway can get the revenue which supports it. And success or failure means the difference between living and not living.

Rate-making divides itself cleanly and clearly into two almost distinct problems. The first is the problem of the distance haul. The second is the problem of the classifying of commodities offered to the railway for carriage. Under the first problem the most important question is:

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What, if any, latitude shall the railway be allowed in its charges for hauling the same thing varying distances? Shall it be allowed to charge the same price for carrying the same thing one hundred miles that it charges for carrying it one thousand miles? Under the second problem the most important question is: What latitude shall the railway be allowed in the distribution of the burden of its support upon the different commodities which it carries? Shall it be allowed to charge five mills per ton per mile for certain kinds of merchandise, and ten, twenty, forty, one hundred, times that amount for other kinds of merchandise?

At the outset I desire to say that under present conditions these problems present not the slightest interest to me. I am entirely satisfied that given the conditions under which our railways have grown, and the conditions under which they are at present operated, railway methods in these respects have been just what they were compelled to be. Nor am I seriously impressed by the conscientious efforts of the Interstate Commerce Commission to "equalize" the burdens brought about by the system of discriminations under which the railway has grown. The trouble is inherent in the system and can, in my opinion, be eradicated only by a radical change in the relations of the railways to each other and to water transportation. What interests me is to know

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whether the abuses which are so bitterly complained of would disappear if our transportation system were one harmoniously working organization.

VIII. RAILWAY RATES AND DISTANCES

Railway rates and public policy

It has been insisted in the course of this argument, that the transportation system is primarily interested in but one problem—the problem of getting revenue enough for its support, including, of course, enough to make such a return to its invested capital as the sovereign power will permit. That revenue being assured, the transportation system will perform any particular service it is called upon to perform, in such manner and at such rates as the public wisdom may decide it should. It will act with absolute impartiality to all who ask its services, or it will give special preferences to some shippers or to some places, just as the people determine. This would be the attitude of the transportation system if it were one organization.

Of course the transportation systems and individual railways which we have now, cannot pursue the course of absolute impartiality, simply because each system has to look out for its own bread and butter, and if in doing so another system goes short

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of food—well, that is its own affair. In this case the getting of bread and butter is the getting of business. The getting of business is the getting of that necessary aggregate revenue. Hence it is, that the railway systems cannot permit the public to interfere with their methods of either getting or doing business, otherwise public foolishness will get the railway business so snarled up that there will be a failure to get that all-important aggregate revenue. But once assure that, and the public may settle all intermediate and minor questions as it sees fit. But this is not to say that they should not be settled intelligently and justly.

It is questions of public policy, if there are any, concerning transportation, that we will now try to look into. Let us look first at the system of "distance-charges" which has grown up with the railway. By distance-charges I mean the charges which the same or different railways, make for carrying the same quantity of the same commodity different distances. Let it at once be said that the passenger traffic is not, in any important degree, involved in this problem. A mile is a mile in the passenger service, and throughout the United States the rate is so nearly uniform in all directions that variations are negligible.

The first question that the rate-making tyro asks is: Why should not freight rates follow the same rule as passenger rates? Why not

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charge just so much a mile, no matter whether freight be carried one mile or one thousand miles? These questions are for the primer class. Answer: Because the railway would lose money on the one-mile carriage, and the freight would eat itself up on the thousand-mile carriage. Hence it is that a rational reason exists for a disproportion between the charges for a short haul and for a long haul. It is not necessary to inquire fully why this is so; it is only necessary to inquire what the proper limitations of the practice are. The answer is, it ceases to be right railroading when the short haul becomes burdened to make the long haul possible.

All transportation starting from a given point should bear its just, its reasonable, and perhaps its equal share of the initial charges which go before the actual act of carriage begins. As every one knows, these expenses are very heavy. To some extent, they depend upon one's conception of where a carrier's business begins. I know of no very persuasive reason why it may not begin with the prospective passenger at his abode and with prospective freight wherever it may be. But that aside, it is necessary to maintain places, in some instances vast and very costly, where the subjects of traffic may be accumulated prior to the commencement of the journey, and where the facilities of transportation, engines and cars, may be maintained in quantity sufficient to

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answer all requirements. Likewise, at the end of the journey like places and facilities must be maintained for the temporary accommodation of the persons and property carried. Of course these places and facilities subserve both ingoing and outgoing traffic. Upon their proper maintenance largely depends the safety, adequacy, and expedition of the transportation business. To handle this business in its temporary stopping places, requires a vast army of employees. Roughly speaking, these constitute initial and terminal charges. Now it is obvious that these first charges on transportation are exactly as heavy on freight that is to be carried a short distance as on freight that is to be carried a long distance. You may say, in a general way, that all these charges anticipate the getting of the freight or passenger *into the car*. It, therefore, seems to me that each kind of freight, *in proportion to the charges for carriage imposed upon it*, should bear its proportion of initial and terminal charges, no matter what distance it is to be carried. This necessarily loads a short haul with relatively heavy charges. But it is only just and no one should complain of justice.

How far may a railway haul freight ?

This may seem a curious if, indeed, not a silly question. Yet I cannot doubt that there is a

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legitimate limit to the distance that some, if not all, freight may be carried, and that the failure to regard this legitimate limit has led to many of the abuses with which the railway has been charged and among others, to some extent, the short and long haul, in its bad aspect, and more especially, the unequal distribution of railway support and the discrimination against industries in different parts of the country; which have given rise to such just complaints, and the attempted readjustment of which constitutes the chief, but unavailing, occupation of the Interstate Commerce Commission.

This subject was lightly touched in a previous part of this argument. It is necessary now to consider it a little more seriously. The business of a railway may be roughly divided into four classes: illegitimate, legitimate, desirable, and most desirable. The cost of conducting a railway in the United States may be divided into four kinds (and there can never be less than three kinds in any place under any system). In order to give these names, we will call the first kind of cost, primary cost, that is the actual cost of train movement, or what is usually termed, in a narrow sense, operating expenses. The next kind of cost we will call secondary cost, or the cost of maintaining the roadbeds and structures in such condition that trains may move over them. The third kind of cost we will, without

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much care for language, but only to give it a name, call tertiary cost, that is the cost of money borrowed to make the railway in whole or in part. the fourth kind of cost we will call, with still less propriety, quaternary cost, that is the cost of money sunk in the railway and not secured. It is represented by the dividends paid on stocks. Just to make the linguistic job complete, we will call these four kinds of cost the quaternion of railway expenses.

Now you have a railway all completed and ready to do business. It must either do business or it must quit. And if it is to be a real railway, it must do business which in the aggregate will pay the quaternion of expenses. But this is evident, that any business which it can do which will more than pay the primary cost, will produce a profit, however slight, which may be turned over as a contribution to the payment of secondary cost, or the cost of maintenance. Likewise, any business which it can do which will more than pay both primary and secondary costs, will produce a profit, however slight, which will help to pay the tertiary cost, or the interest on borrowed money. Likewise, any business which it may do which will more than pay primary, secondary, and tertiary costs, will produce a profit which will help to pay quaternary cost or dividends. It is, therefore, equally obvious that any business which will pay something more than primary cost,

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is legitimate railway business, and any business which will not pay something more than primary cost, is illegitimate business. Likewise, business becomes more and more desirable, according as it contributes more and more to the total cost of transportation.

All this learning of the philosophers was known equally well to Adam when he originally engaged in the camel transportation business, as it is now known to the most illiterate teamster, to wit: that it is better to have his work animals doing something at a price which will provide them with grub, than to have them standing still eating their heads off, but that it is much more desirable to have business which will put profits into the bank.

Applying these "principles" to the question: How far a railway may legitimately haul freight; we will find the question answered by another question: Why should freight be hauled at all? And the simple answer to this is, Because it is worth more at the end of its journey, than it was before it began to change its place. Obviously, then, if the freight has not increased in value, the transfer was without profit to the shipper. Equally obviously, if the cost of transportation to the carrier was greater than the primary cost, the freight has been carried at a dead loss to the carrier. Obviously, then, legitimate transportation ceases where the primary cost to the carrier

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crosses the line of increased value of the thing carried.

Our railways have not always—I might say they have not generally—acted on these principles of transportation. Where they could do so they have sacrificed the short haul to the long haul. They have carried freight long distances at prices perilously near if not below the cost of turning the wheels, and they have compelled the short haul to bear the burden of these losses. That is, they have made the short haul provide the revenue to pay secondary, tertiary, and quaternary costs. That this is wrong the railways admit, but they say they are helpless to correct the wrong so long as they are compelled to work under competitive conditions; that is, competition between themselves and with water transportation.

There is a sort of an apology for the wrong of the long and short haul offered by certain learned writers. While admitting the injustice to the short haul, they say that this is more than counter-balanced by the general good which is done to the country at large. They say the ability given to the carrier to carry goods at a loss over long distances has served to open up our remotest natural resources, and, they say, that this has served to keep up competition among the producers in widely different areas and at greatly different distances from points where consumption is greatest. For instance, they say, this system of

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charges has enabled Chicago to get pine from the forests of Wisconsin, the Pacific Coast, the Southwest, and the Southeast at practically the same price, while at the same time it has made it possible for these remote regions to find markets for their lumber. This naturally introduces the second aspect of "distance-charges," that is, the relative charges which are made for carrying the same commodity different distances in the same or different directions, in the United States.

Relative "distance-charges"

The contention of the American railways is, that they may carry freight between any two points however distant, at as low a rate as they may deem advisable, and that they may charge whatever rates they choose between any two points however short the distance, and that the latter points have no just cause of complaint so long as the rates charged them are not inherently unreasonable. Boiled down this contention amounts to this: that those who are charged reasonable rates have no cause to complain that others are charged lower rates. This contention does not apply to individuals of the same place, for if it did it would justify the giving of rebates; but it applies to places, cities, districts, and whole portions of the United States. The result of this contention is that the railways control the com-

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merce of the United States. If they choose to do so, they may, by giving low rates, build up one place, or one locality, or one district, or one portion of the United States, while holding in check any other place, locality, district, or portion of the country by the imposition upon it of only inherently reasonable rates. For, other things being equal, freight rates control the trade of the country.

To concretely illustrate this railway contention, I may say, that the railways, having made a reasonable rate from New York to St. Louis, claim that St. Louis has no right to object that the same rate is given between New York and San Francisco. Likewise it is contended, that if the rate from New York to San Francisco is reasonable, no point east of the Missouri river can complain, if all that vast territory is charged exactly the same rate to San Francisco as is charged from New York. Thus New York as a purchasing point for the Pacific Coast, is put upon a par with every other trade center between New York and the Missouri river, notwithstanding these other points may be, like Chicago 1000 miles, or St. Louis 1500 miles, nearer the Pacific Coast. Thus the railway claims the right to annihilate distance.

But while the rate from all points east of the Missouri river to the Pacific Coast is equal, there is a strip of territory midway between the Missouri river and San Francisco, where the rate is about

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three times the total rate from New York to San Francisco. From this high point of rates they slope down both east and west. This may be illustrated by the following curve.



These sorts of hill and low-level freight rates are practically characteristic of the freight-rate system of the United States. The high hill rate is made by adding to a low rate between terminals the local rate back from the nearest terminal to the intermediate point.

One more practical illustration of distance-charges as they characterize transportation in the United States, will suffice to illustrate the injustice that they work. About half the salt consumed in the country is made from brine wells located respectively in the states of Michigan and Kansas, while large quantities are also made in New York, Louisiana, Texas, Utah, and the valley of the Ohio. Naturally, you would think that all these places ought to have such chances at the salt trade as nature afforded them, or, at least, that none of their natural advantages would be taken from them by railway rates much more favorable to some than to others. Yet I find,

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from a case decided by the Interstate Commerce Commission in 1892, that the railways charged ten cents per hundred pounds to carry salt from the Michigan place to St. Louis which was 611 miles distant, and that they charged $23\frac{1}{2}$ cents per hundred pounds for carrying salt from the Kansas place to St. Louis which is 575 miles distant. More remarkable still, the railways charged $15\frac{3}{4}$ cents per hundred pounds for shipping salt from the Michigan wells to a town in Nebraska a distance of 504 miles, and 19 cents per hundred pounds for shipping it from Kansas to the same town distant 247 miles. Instances of this sort might be given by the thousand from all over the United States. It is the custom.

The constitution of the United States granted to congress the power to regulate commerce between the states, but congress has turned its job over to the railways with the added power to regulate commerce *throughout* the United States. Where the railways say commerce may exist, there it exists; where they say it shall not exist, there it does not exist; where they let it just barely exist, there it just barely exists. Moreover the constitution is very imperative to the effect that no state should impose any obstacle to free trade among the states, and at the same time limited the federal government in restricting it; but what the United States could not do and what no state could do, that the railways can do.

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What principle should govern distance-charges?

Read the cases that come before the Interstate Commerce Commission from one end to the other, and you will never find that the railway companies justify their distance-charges on the ground that they are right and just. Uniformly they have three defenses: (1) they are compelled to the practices by water competition; (2) they are compelled to the practices by competition with each other; (3) they are not responsible for the existence of the abuses, because the disjointed, unco-ordinated railways and railway systems place beyond any one railway or system of railways the power to make the correction. It can only be done, if at all, by united action. And that the laws prohibit.

If we are to have a right solution of the problem of distance-charges, we must find it in some better, broader, and more just principle than mere selfishness, whether this selfishness be individual or territorial. Whatever else this country and its government stand for, this principle lies at their very foundation, that over its broad expanse, no section, however small, shall be deprived of its equal right of self-development, by any action of the national government, or by any action of any state government, or by any action, under the disguise of individual enterprise, which is tantamount to governmental action. The railway is

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essentially a public, governmental institution; as essentially so as highways themselves are. That which the government cannot do, the railways must not do. The government is forbidden to discriminate against any part of the United States by any preference concerning commerce. Rate discrimination against a place, a district, or a large territory, are the worst forms of preferences. Railway rates may be—have been—made which practically stop the commercial growth and development of cities, districts, and even large territorial expanses of this country, while preferential rates may make and have made the commercial development of cities, districts, and even large territories at the expense of others. Every discriminatory rate has this inevitable tendency, and the discrimination has but to be severe enough to completely accomplish the result.

The greatest problem in the future will be, as the greatest problem in the past has been, to hold this great and heterogeneous country together. This is not essentially a government by force. It is essentially a government based on the identity of interest of all its territorial parts. Such identity of interest is preserved in two ways. (1) By the maintenance of absolutely unrestrained commerce throughout the length and breadth of the land. (2) By the inhibition of any commercial discrimination against any portion of the country by any act of the government or by any

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quasi-governmental agency. Every discrimination against any part of the country is a disintegrating factor. And the discrimination has but to affect a sufficiently large portion of the country to start the mutterings of rebellion. Either this is a government of equal justice to all its citizens and to all its territorial parts, or it is no government.

The federal congress, seeing the rank injustice of railway discrimination, some twenty years back passed a law which purported to measurably prohibit discriminations arising from distance-charges. It was perhaps the most remarkably misworded act which ever emanated from any legislative body, the members of which were capable of expressing their meaning in any known language. This law declared it unlawful for any interstate carrier "to give any undue or unreasonable preference or advantage to any particular . . . locality . . . in any respect whatsoever." And it declared it unlawful for such carrier

to charge or receive any greater compensation in the aggregate for the transportation of passengers or of like kind of property, under substantially similar circumstances and conditions, for a shorter than for a longer distance over the same line, in the same direction, the shorter being included within the longer distance; but this shall not be construed as authorizing any common carrier within the terms of this act to charge and receive as great com-

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pensation for a shorter as for a longer distance: Provided, however, That upon application to the Commission appointed under the provisions of this act, such common carrier may, in special cases, after investigation by the Commission, be authorized to charge less for longer than for shorter distances for the transportation of passengers or property; and the Commission may from time to time prescribe the extent to which such designated common carrier may be relieved from the operation of this section of this act.

It will at once be perceived that this act amounted to nothing, and it is doubtful if its makers intended that it should amount to anything. If they intended that it should amount to anything, then they were simply hoodwinked. But it would appear most likely that they never did intend it to amount to anything, because they have never since changed it. Indeed it is not unlikely that the more intelligent members of congress knew full-well that no law could be made which under existing railway conditions could have any effect; so they just made a law which confirmed the practices which had been forced on the railways. For the railways never claimed the right to discriminate "under substantially similar circumstances and conditions." The trouble always has been and yet is, that the "circumstances and conditions" were never "substantially similar." They were always made dissimilar by three cir-

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cumstances and conditions, to wit: water competition, inter-railway competition, and inability of one railway to control the charges of another or others.

Of course the Supreme Court made short work of this act, relegating it to the waste basket where it belonged. Now the important point is this: that you can never hope to do away with discriminations arising from distance-charges, until you do away with the causes which justify the discriminations; that is, competition of the kinds the Supreme Court decided justified discriminations. Were it not so serious, it would be ludicrous to see congress firing its blank-shotted batteries at the same time against railway combinations and railway discriminations. The very laws which prevent combinations of necessity perpetuate discriminations. It would therefore be hopeless to attempt to formulate any plan to eradicate the evils and injustice of railway discriminations against localities under present conditions.

But if we had a transportation system, including both water and rail facilities, then I think a formula could be presented which would at least meet the requirements of justice, even if it displeased favored places. It would be something like this: *Throughout the United States in whatever direction transportation is employed, the aggregate charge for carrying the same weight of the same kind of freight shall be the same for equal distances.* This

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is what I understand by the phrase requiring the transportation system to conduct transportation "on terms of uniformity and without preference to any person." If every locality in this country had the right to have the same kind of freight shipped to and from it, the same distance, for the same aggregate charge, it is difficult to discover how any could complain that it is not being treated justly. This would, of course, be grossly unjust to the railways at present, but if there is any other principle which results in fair practices to the different producing communities of this vast country, I fail to see what it is. It would doubtless cut the profits of some producing centers by limiting their fields, but the railway does not exist for the purpose of equalizing fortunes. It exists to impartially serve all. As before said, there is not an argument justifying the granting of rebates to individual shippers which is not equally fallacious when applied to the granting of specially favorable rates to localities, for these specially favorable rates to localities are but specially favorable rates granted to the producers of those localities. It was not Bay City, Michigan, that had special rates on salt more favorable than the Kansas town: it was the manufacturers of salt that had the special favor.

It should at once be understood that the formula above mentioned is not based on any such theory as that charges should increase proportionately

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with mileage; that is, that the charge for hauling 400 miles should be double the charge for hauling 200 miles. On the contrary, you may work the railway to any legitimate extent; that is, until the cost of carriage crosses the increased value of the freight carried. All I ask is, that, however far a particular kind of freight is to be carried for an aggregate charge, any other place in the United States may have the benefit of the railway in the carriage of the same kind of freight the same distance at the same charge.

As will be perceived, this would work a radical change in the relation between production and transportation. At present, production is at the mercy of transportation. Under the proposed plan, transportation could have only its legitimate effect upon production, and that effect would be perfectly uniform. Each producer would have to rest on his own merit; none could bring the railway to his assistance by practically making it his partner.

How uniform rates would work

At the present time, each railway and each system of railways claim the right to transport any kind of freight any distance at any rate below the maximum fixed by law, where there is a maximum rate established by law. Likewise each railway or system claims the right to charge such

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rates as it finds it necessary to charge to terminals having water or railway competition, and to charge intermediate points the aggregate through rate and the return local rate. Likewise, each railway, either by itself or in joint operation with other railways, claims the right to charge different producing centers the same rates for carrying the same kind of freight different distances, even though the different distances may be as much as 500 or 1000 or 1500 miles, the practical effect of which is to deprive the nearest producing center of any advantage by reason of its geographical situation.

Likewise, each and every producing center claims that it has the right to have all freight rates to and from it equalized with every other producing center. Likewise, the Interstate Commerce Commission, having of necessity surrendered its claim to overthrow discriminations arising out of the long and short haul, is now devoting its attention to the equalizing of rates among producing centers.

Thus it will be seen that the theory of "equalized rates" is placed squarely in issue with the theory of "uniform rates." At present the railway has been reduced to a mere adjunct of production. It is worked solely in the interest of producing centers. The rights of the consumers are never for a moment taken into consideration. Once in a while, you will, indeed, notice in the decisions of the Commission, a vague sort of a thought

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floating past the minds of the commissioners that there is such a class of people in this country as consumers. But they are never represented before the Commission. Always the parties before the Commission are the jobbers, the manufacturers, and the railways. Between these three the consumer is ground up. Take, for example, the Transcontinental Freight Rates' Case. Here all producing centers east of the Missouri were carefully protected by equalizing their rates to the Pacific Coast terminals (mainly Seattle, Portland, San Francisco, Sacramento, and Los Angeles), while the jobbers of these places were avowedly given a monopoly of all Pacific Coast trade. But the fact that this equalization of rates compelled every consumer between the Missouri river and the Pacific Coast to pay from one and a half to three times the rate he should have paid, is an insignificant fact worthy of only a passing thought. If the people of that vast region were not the best-natured and most patriotic people in the United States, they would have caused the stones to mutiny. Apply the same principle to New England and there would be another tea party in forty-eight hours.

And note that the sole and only excuse, apology, or justification advanced by either the railways or by the Commission for this monstrous injustice, is the fact that the transcontinental railways are threatened by water competition.

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Now note the difference if the "circumstances and conditions" had been such as to justify uniform instead of equalized rates; that is, if water and rail transportation had been unified. The Pacific Coast ports would have shipped such goods as would naturally come to them by water at low water rates, and under uniform railroad rates those goods would naturally have radiated from Pacific Coast ports until they met the point where transportation of the same goods by rail from the east crossed the line of increased value of the freight received for transportation. At the same time the business of St. Louis, Omaha, Kansas City, etc., would have reached well into or overlapped the territory naturally tributary to San Francisco. Chicago would have overlapped St. Louis and Omaha, and the entire region from the Missouri river to the Pacific Coast would have been served by rates of one half at least what they are now. At least, whatever rate would result would be a *just rate*, and no man can complain of justice however heavily the burden falls upon him. Thus under uniform rates there would be a constant overlapping of circles radiating from each producing center, and whatever else would happen, this at least would be true; that no place could complain of anything except that its geographical position did not place it an equal distance from every other place in the United States. This is what I mean by making

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transportation the equal servant instead of the master of man. But this it is impossible it should ever be, until all the facilities of transportation are organized into an harmoniously working entity.

I have frequently referred to the first principle of railroading as carried on in this country, as the principle of "getting and doing business." As an old traffic manager once expressed it: "My boss taught me early that I could get business or get out. And," he added laconically, "I got it. I would n't care to tell you all the ways by which I got it, but I got it and no receiver ever collected any of our tolls." I trust I have made sufficiently plain my notion of the extent to which a railway may legitimately carry freight. But I am satisfied that there is an enormous waste from the excessive carriage of freight in this country, and that this loss falls on the consumer. Perhaps I may make this plain by recounting one of the innumerable anecdotes told me by the aforesaid traffic manager concerning his "boss," who was one of the greatest railroad men in the United States. He said: "The old man never wanted to see a factory at the place where the raw material was produced. He wanted to haul the raw material to just as distant a manufactory as possible. That gave us haul No. 1. Then he wanted to haul the manufactured goods to large wholesale places just as far away as possible.

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That was haul No. 2. Then he wanted to haul the same freight from the wholesale places to the retail distributing points. That was haul No. 3. We could n't get any more out of the freight unless we stole it." Which tends to illustrate the theory herein presented, that the railway exists for the country, not the country for the railway.

Nor should the fact be overlooked, that what has been herein said is applicable to the establishment of a transportation system for the United States. Even if we did away with competition ourselves, we would still have certain foreign transportation to compete with. I suppose the Canadian railways could be induced to play fair. If not, I suppose we could compel them.

IX. CLASSIFICATION OF TRAFFIC

In the last section an attempt was made to bring forward rather prominently two ideas concerning transportation. The first was that instead of being a dominating element or force in American life, it should be a serving element or force; the second that it should operate as a force tending to integrate or hold together the different parts of the country, instead of a force tending to disintegrate or divide the country up into sections. The conclusion reached was that to prevent any part of the country having any just

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cause of complaint against any other part, or any locality against any other locality, rates should be uniform throughout the entire country, and that this end could be attained only by unifying all transportation facilities.

These ideas are now to be brought still more prominently into view. If I may be allowed to paraphrase a great saying, we are to see that man was not made for the railroad but the railroad for man. Producer, trader, and consumer are all to be impartially served, subject to the fundamental maxim, that the only excuse for transportation is that it serves the welfare of man. Transportation is no longer to be viewed from the standpoint of the railway corporation, but from the standpoint of the users of the railway—the public. The investors in the means of transportation having been fully, fairly, and securely provided for, the question is, how can the public make the best use of those facilities.

In the view of the writer, this aspect of the transportation problem does not graduate into either socialism or governmental ownership. There is a vast difference between socialism and “mutualism,” and there is a still wider difference between governmental ownership and governmental control of transportation as outlined herein,—differences wide in their inception, wider still in their practical operation, widest of all in their final effects.

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Every one, of course, knows that, if he is willing to ride in a "tourist" car, he can cross the continent for about one half what it will cost him if he rides in a first-class "Pullman," and that, if he chooses to ride in a "day" coach, he can save the dollar or two that he will be asked to pay if he rides in a "parlor" car. Everybody also knows, that a carload of coal, sand, building stone, cement, etc., may be shipped for a fraction of what it costs to ship a car load of dry goods or other manufactured articles. Every one who has thought on the subject, has, of course, been struck by the fact that it does not cost the railroad *twice* as much to carry a passenger in a Pullman as in a tourist car, for these two cars are frequently a part of the same train and are subject to practically the same costs to the company. But this fact is much accentuated when one thinks of it in relation to freight charges. One would naturally think the extra weight of a train made up of the same number of cars, filled with coal, would cost the railroad more to move than it would a like train, the cars of which were filled with expensive dress goods; yet the company would charge a hundred or maybe a thousand times as much to carry the train of merchandise as the train of coal. The first thing then, that strikes a person as peculiar in the railroad business is, that its charges for various classes of service do not bear any marked rela-

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tion to the relative cost to it of performing those services.

Now, if I were to write a hundred pages on the why and wherefore of these seeming anomalies in the railroad business, it would be found in the end that they are all explained by the simple commonplace of the necessity of the railroad to "get business." If it charged the same rate per ton for hauling coal as for hauling silk, the coal would simply lie in the ground, while the amount of silk carried would not very greatly increase. Wise old railroad men! They said: "Let us classify freight. Let us charge on each class what it can pay. Let us make everything move. Let us see if we can *make* as much, or more, if we charge some commodities very light rates and others very heavy." Behold, how business makes business! Low rates on coal opened up the coal fields. Low rates on iron ores opened up the iron mines. Low rates on both assembled the two, and the monumental steel business of the United States followed. Result! more business of a paying class for the railroads.

There are two things to which attention is here especially directed. The first is, how the railroads, in serving their own interests, wrought a great service to mankind. Far be it from me to accuse the awful railroad corporations of philanthropic motives. They would be the last to claim them. The service to mankind was an incident. But it

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is a suggestive incident nevertheless. The second is, that transportation charges which are *immediately* perilously near the losing point, may ultimate into very remunerative carriage. Under our past disjointed railways, this principle has not had full play; for no company was especially interested in carrying freight at or near the losing point, only to furnish profitable freight to another road. It will be obvious that if all transportation facilities were unified so that ultimate profits redounded to the entire system, the principle would have full play and much new business would be developed.

About all the suggestions which I have to make on the subject of the classification of railway services are based on further extensions of the two ideas above noted, except that we should face about so that instead of being an incident of railroad business, the service to man should be recognized as the primary factor in the differentiation of charges. It is not to be disguised that the ethical and business aspects of transportation here join hands. But rest assured that the railroad companies have in their desire to "get business" already brought these two aspects of transportation close together. Their classifications have been based on the assumption that they would result in the greatest possible movement of trade, and he would be a bold thinker, indeed, who would propose any theoretical test as against

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the test of years of actual experience. Expected benefits might be looked for in the results following the unification of all means of transportation, rather than in any radical rearrangement of the respective burdens which each class of freight has borne.

Suppose it were possible to imagine a society which chose to use its transportation facilities primarily in the interests of its people. What would be its attitude toward those facilities? "First," it would say, "the aggregate amount raised should be ample to support the means of transportation. Second, that this aggregate amount should be apportioned among the various commodities carried, so that the least burden of charges should fall upon the absolute necessities of man." For the economists all tell us that a nation cannot be great and prosperous whose people have not the possibility of obtaining the absolute necessities of life within the limits of a reasonable expenditure of their energies. These absolute necessities of life are the foods upon which our bodies are sustained and the substances by which our bodies are protected against the elements. All other substances produced, or transported, sustain, with respect to these absolute necessities, an ever ascending scale of lessening life importance, until articles are reached recognized by all distinctively as luxuries. Not only are we able to see that all classes of production

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conform in a general way to this ascending series, but also that each class has its own ascending scale. At the base of the general series are found the groups of cereals and meats, the fuels, wood and coal, the building material of the primitive character, the coarse wearing apparel of the poorer classes, the necessary household table and kitchen furniture and utensils. We recognize quickly that each of these groups has its own scale. Wheat, corn, oats, rye, etc., are extremely useful in their raw state for cattle and, to a less degree, for man. Refined into flour of various grades, they "ascend" until there is reached the delicate luxury of the four-o'clock tea table. It is so with all building materials, from the cheapest kind of lumber to the most luxurious hard wood; from plain hardware to the most exquisite products of our factories; from raw silk, flax, wool and cotton to the finest products of the looms. It would serve no purpose to tabulate these. What should be observed is, that with this ever ascending scale from necessity to luxury, has gone an ascending scale of values.

The question is whether, from the standpoint of the people, this combined ascending scale of life-necessities and values, or, putting it otherwise, of comparative life-necessities in relation to values, with corresponding elements of comparative weight, bulk, etc., should constitute the basis for the classification of freights? Of course the

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most obvious objection to it is the apparent difficulty of always drawing nice distinctions. Those whose minds are so constituted that they always overlook the essential in view of the exceptional, and especially that peculiar biped whose ambition in life it is to see its ridiculous phases, will at once inquire whether the tail of the ox, which makes good soup, or the horns, which make buttons, or the hoofs, which make the nasty stuff called gelatin (as I have been told), is to be regarded as most important? Objections of this kind need not worry us much; for we observe that of the nearly ten thousand articles now carried by railways, some seven thousand have not as yet been found to fall into any recognized classification, and it would not be surprising if any suggested classification would require the shipment of considerable freight as "commodity." Meantime it may be said that if this entire list of ten thousand articles were laid before a person of ordinary intelligence, he would be able very quickly to specify those upon which human life principally depends, and he could make a very fair attempt to ascend the scale until the region of luxury was reached. If, in addition, he had the benefit of a scale of values based on certain standards of measures, weights, and bulks, he would not be long in getting most articles into their appropriate groups for the purpose of grading the rates they should pay.

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So far as the subject of transportation rates is concerned, the views outlined herein may be summed up as follows: reasonable and fair rates are such as, when applied to the whole system, will produce a reasonable and fair return upon the capital honestly invested in the system; the aggregate amount to be raised should be raised by rates which are lowest on the absolute necessities of life and highest on luxuries, relative values being taken into consideration; the charges should be the same on the same commodity for equal distances in all directions, and should increase as the distance increases according to the capacity of the freight to bear the charge, until the cost of carriage crosses the capacity of the freight to bear the charge, at which point legitimate traffic ceases.

So far as passenger traffic is concerned, but little has been said, because it is rapidly adjusting itself with the elimination of competition. There can be no objections to such classification of the passenger service as has prevailed. Commutation service is a class quite by itself, and if it were not justified on grounds of public policy—the relief of the congested life of large cities—it would be justified by its peculiar nature. But care should be taken that no discrimination be shown against different suburban districts.

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X. THE TRANSPORTATION SYSTEM AND THE COURT

The government and the transportation system

It will be observed that the government, neither national nor state, has much to do with my transportation system. The primary purpose of the whole scheme being to take the railway out of politics and to keep it out, and having taken great pains to have its rights, duties, and obligations defined by the supreme legislative act of the people, it is not likely that I should have left it in a position where it is necessary to keep its lobby in the legislative halls, its hirelings in congress, the legislatures, and on the benches, or where politicians could be elected to office to thrive off it by blackmail.

Neither has it been left as a corporation whose trustees may fail in responsibility, or obedience, to the laws of its creation. The government may have a Secretary of Transportation, if it thinks its dignity will be thereby enhanced, and it may have as many more political nosers as it chooses, so long as they have nothing to do with the actual operation of the system and no chance to get their itching palms on its finances. And it may have as many sleuths as it cares to employ to see that no one but themselves go wrong. Personally, what I want is a court, which shall see that these

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trustees are held responsible, just as any other trustees are, for the strict fulfilment of their great trust.

Hence while leaving it to the trustees to conduct the affairs of their corporation, as any other trustees should and as the directors of railways are supposed to do at present, I took the liberty, while arranging everything else, incidentally to provide for a court with original, exclusive, and final jurisdiction, to hear and determine the following matters:

1. The gross amount required to be raised by freights and fares to support the transportation system, including the payment of dividends and the establishment of a suitable surplus, and the distribution of the burden thus created over the different classes of service performed; that is, the classification of passenger and freight service.

2. To hear any questions which might be presented by any one complaining that the system was not being operated in any particular according to the law, and, on complaint, or of its own motion, to correct any discriminatory practices.

3. To hear petitions by the board of directors, or by any community, for the construction of new, or additional roads, to make the system safe and adequate.

4. To audit the accounts of the trustees, to judicially approve or disapprove all contracts for the construction of permanent improvements,

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and to order the issuance and sale of additional stock to pay for the same.

5. To act as a court of arbitration between the corporation and its employees.

All these functions of the court are so obvious that only the last requires special mention.

In no direction does the transportation system owe greater obligations than to its employees. These obligations being fulfilled, the duty which the employees owe to the public and the corporation should be rigorously enforced. The corporation owes it to its employees that they be paid fair wages, have the safest appliances with which to work, and that they be not required or allowed to work more than reasonable hours. This being so, negligence and disobedience of lawful requirements by employees, endangering not only their own lives but those of the public, should be punished.

There could be no greater disaster to the country than a general railway strike. The right to work, or not to work, is the inherent right of every American. The right of those who labor to organize for their protection is a right, the exercise of which should be encouraged. But there can be no such thing as a right to bring about a general strike which will paralyze the whole country as much as a war, provided there is an impartial tribunal to which grievances may be submitted. It is for these reasons that I have thought juris-

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diction should be conferred on the court to act as a court of arbitration between the corporation and its employees. In as much as railway employees and their families represent a twelfth of the population of this country, and in as much as the employment in which they are engaged involves the interests and welfare of the whole country, the court that stands as arbitrator between the twelfth of the people and the rest of the public performs an important function indeed. This important duty should not be left to any board of political appointees, but to a court which may hear and judicially determine, and having heard and judicially determined, possesses the power and authority to fearlessly execute its decrees.

Doubtless it will be said that this reduces the duties of the board of directors to the mechanical business of running trains. And when one thinks about the matter seriously, what, after all, is transportation more or less than the moving of trains and other appliances whereby we and our goods, wares and merchandise may be carried in safety with due expedition? Who was it, I wonder, who first determined that it should be the prime duty of a railway manager to manipulate the stock market? And as for their wonderful enterprise in opening up new territories, or new industries, who is there that does not know that they must be approached on bended knees, even

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to grant an audience to the real promoters? True, in the past they have shown much skill in purchasing one another's roads and their securities, and in making connections, consolidations, mergers, leases, and the like. But their ability in that direction would no longer be required, were their roads organized into one transportation system. What they have been trying to do contrary to the law may here be done for them in accordance with the law. It will be interesting to know whether their consolidations have been in the interest of the country, or in their own interests, and whether they would approve of a plan to make the consolidation complete. Hardly, I imagine; it would deprive many of them of most lucrative employment, not to mention opportunities closed to them forever.

Yes, it may be admitted that the attempt has been made to make an automatic transportation system. Its capitalization shall balance its value; its freights and fares shall compensate its expenditures; its securities shall be stable and have incomes equal to the value of money; its operations shall be without fear or favor—*it would be nothing but a transportation system*. But, O you politicians, where would your occupation be? And, O you blatherskites, where would you get your blather? And, O you in high places, what would you fulminate about? And, you syndicators and underwriters and pawn-brokers, what

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would become of your profits? And, you wash-salers, who sell the entire capital of Reading, for instance, one hundred times over in one year, what would you do?

I admit that a transportation system which had no business but just to *transport* the people of this country and their goods, presents unpleasant prospects in sundry directions. But most of us could stand them.

Under such an automatic transportation system, what a host of knotty railway problems would at once disappear. I refer not only to the financial questions which are forever killing our railway presidents by apoplexy and heart disease. Even our old friend, the traffic manager, would have nothing to do but work out an equilibrium of rates which would support the system; which being established on the principles of justice could with equal justice move up or down as circumstances would require. Moreover any man having anything to ship any distance, would know just what it would cost. I should think that under such a system the traffic manager would not have to have his rate clerk by him, as now, in order to tell what rates could be given. And as for our present system of car exchanges, charges for, and repairs of, foreign cars; all that would disappear when all cars were owned and repaired by one company. More than half the book-keeping now required of the railways would, of course,

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be obsolete. Nor, to jump from one thing to another, can it be doubted that the consolidation of terminals, stations, yards, etc., would greatly expedite business and free the patrons of the railway of a thousand annoyances now suffered. Economies would be found everywhere.

If, therefore, what is objected to is the automatic working of such a transportation system, then I call your attention to the fact that the most perfectly organized organisms of which we know are those the parts of which automatically perform all their functions.

XI. TAXATION OF TRANSPORTATION UNDER SUGGESTED PLAN

One of the just complaints of the people against the present railway system is, that it does not bear its just share of the burdens of taxation. In the year 1906, the railways paid, in round numbers, \$68,000,000 in taxes. At the same time they claimed their assets to be worth \$17,534,000,000. As the average tax rate in the states and counties in which the physical property of the railways lay, must have been over rather than under 1%, it is obvious either that the assets have been much over-valued by the railroads in their reports, or much under-valued for taxation purposes; for if their report-value is correct, they should have paid at least \$175,000,000 in taxes,

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or nearly three times as much as they did pay. Even if they were actually worth twelve billions, they still paid only about half what they should.

This is an old sore spot with the railroads. When they want to keep rates high, they insist that the roads are enormously valuable; when they are to be assessed for taxation, the roadbed is worth no more than the adjoining real property. So the same man going from the Board of Equalization to the Railway Commission, has naturally to possess an elastic conscience. This is about on a par with everything else under the present system. Well, then, how should taxation work under our suggested system?

Any theory of taxation which permits any species of property to escape its equal burden of taxes, or which twice taxes the same property, is unjust. The transportation system as here outlined is a corporation. The physical property of a corporation is represented by its stock. To tax both the physical property and the stock is to twice tax the same thing. Which, then, should be taxed, the physical property or the shares? Obviously, it can make no difference to the state, because under the proposed scheme, quite unlike the present, the railroads and their stocks are of the same value, and as dividends are to be paid on the stock, the state could collect its taxes by requiring the corporation to deduct them from the dividends if the stock was taxed. But it

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would make a good deal of difference to the transportation system and to the persons who paid the tax. If the physical property was taxed, the tax would come out of the pockets of those who use the roads,—the rates would have to be high enough to cover the tax. If the stock was taxed, the tax would come out of the shareholders. It looks very nice to take it out of the shareholders. But it must not be forgotten that the stock is to pay but 5%, while the majority of the existing bonds draw $3\frac{1}{2}\%$, 4% and $4\frac{1}{2}\%$. So that if a tax of from 1% to $1\frac{1}{2}\%$ was to be levied on these securities, it would reduce their income below the point of a desirable investment, and thus the transportation system would be crippled, and no money would be forthcoming for new roads or improvements to produce safety and efficiency. Thus a false step in this direction might destroy the advantages of the whole plan. It is too much like the scheme to borrow money and not pay any interest, beautiful in its conception, yet apt to result in the loss of borrowing power. It is really surprising how many statesmen there are in this country of about that caliber.

Just the same, there are a good many honest-minded people in this land who think that it would not derogate anything from the rights, duties, and obligations of the owners of the twenty-five or thirty billions of corporate stocks and bonds, if they paid something from their incomes for

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the support of the governments which protect them. An income tax in this country is unpopular—so are most taxes. Perhaps the people will, in time, come to the conclusion that the only way to compel that kind of property to pay its just share of the burden of government, is an income tax; which, I believe, will be found in most other civilized countries. Meantime, I see no escape from the conclusion that if we are to have a low income railway security, the tax will have to be, as at present, on the railways and not on the holders of their securities. I say this not out of any tender regard for the holders of such securities, but because I believe the support of the transportation system is of more importance than any theory as to its taxation.

But here an important and somewhat perplexing question presents itself. Of course the tax collected should go to the states. It could be paid by the corporation into the federal treasury, and be by it distributed to the states either in proportion to the value of railway property in the states respectively, or according to their respective population, as would be found most equitable. There would be found no difficulty about that. But the different states have different rates of taxation. Obviously that would not do. Taxes may be raised in two ways: (1) by a very high rate and a very low valuation of property; (2) by a low rate and a high valuation. Where certain

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states knew that railway property would be valued at its full value for purposes of taxation, there might be an inclination to make the rate high and the valuation on all other property low, in order to get an unjust share of the taxes coming from railway sources. In my opinion, the rate of taxation on railways should be, like their charges, uniform throughout the United States. If, for instance, a uniform tax of 1% were imposed upon the capital invested in all transportation facilities, payable quarterly by the corporation to the United States Treasurer, and by him distributed to the states, either in proportion to their respective populations, or value of roads, etc., it would not only afford the most equitable form of taxation, but would bring to the states two to three times the revenue they now derive from their various methods of railway taxation. The tax would not only be certain, but it would conform to the fundamental idea of this scheme,—that transportation is a matter which equally concerns all the people of this land.

XII. WOULD THE PROPOSED SCHEME CENTRALIZE POWER IN THE FEDERAL GOVERNMENT?

Decentralization of irresponsible federal power

That which, in my opinion, is the least of all objections to this scheme of transportation,

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is the one most nearly insuperable. It would require the states to surrender the semblance of authority which they now possess over such railway operations as are purely intrastate. It is hardly probable that if every intelligent citizen in every state were convinced that this scheme would work not only to the advantage of the whole people, but to the advantage of every state as well, concurrence in it would result. So great is our just suspicion of the centralization of power in the federal government, that any proposal looking in that direction is instantly condemned: no other reason than this is required for its condemnation. And if I could conceive of its having the effect of centralizing additional power in the federal government, I should be the first to condemn it; for I have been reared in the strictest sect of believers in local government, and with a horror of irresponsible power, of all kinds, which amounts well-nigh to a nightmare. What I see most plainly is, that the power which we most fear is *now* centralized in the federal government and in the irresponsible branch of it, and that the remnant of authority left in the states is but an irritating phantasmagoria. It is not to centralize further power in the federal government, it is to make the federal authority responsible for a power already centralized in it, that this plan of constitutional government of transportation is proposed.

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It is unnecessary to recount the reasons, already fully given, why the authority of the states over their domestic corporations has disappeared and why the authority once held has been centralized in the federal government. It is sufficient to say that the constitutional authority of congress to regulate commerce among the states has constantly expanded under judicial interpretation, until now every road in any state has practically become an interstate facility of transportation. Even where freight originating within a state is to be shipped to a destination within the state, yet if during its journey it passes by ever so small a distance out of the state, it becomes interstate and not intrastate traffic. Even if a road begins and ends in a state, yet if it permits itself to carry freight originating outside of the state, it is an interstate facility of transportation. This judicial extension of the power to regulate commerce, coupled with the Fourteenth Amendment, giving the federal courts authority to negative any state legislation on the subject of the taxation of railways or the regulation of their rates, completed the obliteration of state sovereignty over railway corporations. The states are left in the undignified attitude of making laws which may be defeated, or vetoed, by their governors-general, the federal judges, not, indeed, by virtue of any constitutional provision which any one ever supposed would confer such powers on the federal

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courts, but purely by virtue of their assumption of it as the final interpreters of their own jurisdiction. This as we have seen creates a legislative vacuum. Its effect is to deny legislative power to the state without conferring it upon any other legislative authority.

We must be rid of this situation by some means. It is absolutely necessary to amend the constitution so that this uncontrolled, irresponsible, centralized judicial power be brought under control by exactly defining the jurisdiction and power of the court which deals with the subject. It is the consummation of governmental absurdity for us to drift on forever, leaving it to the courts and judges to say what return upon the invested capital of corporations engaged in transportation is reasonable. That is a legislative not a judicial function. Let us therefore do one of two things, either confess our incompetency to legislate upon our vitally important affairs or call in a king, who shall have combined in himself legislative, executive, and judicial powers. We are not quite ready for that august individual yet, but we have set up one closely resembling him in the person of a federal judge.

This amendment adds no power to the central government; it makes the central government responsible for a power it has assumed. If the federal judge now has power to say to the states: "You cannot make rates unless they appear to

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us to be reasonable," then we say: "We will give *you* power to make rates, but you will make them according to the fundamental law as we, the public, shall declare it. We will declare what income is reasonable for capital invested in transportation, how rates should be apportioned among commodities, how capital stock may be issued, how the corporation shall be carried on, and it will be your duty to see that the corporation obeys the law."

This does not centralize power; it limits, restricts, and defines a power already centralized. In taking this step the states surrender nothing except their capacity to be irritated by unfruitful legislation.

Governmental vs. corporate centralization

There is another aspect of the dread of the centralization of power which must not be overlooked. Many there are to whom the increase of federal authority is a nightmare, yet who can view with complacency the centralization of non-governmental power. The one fact which admits of no possible doubt is, that this country is in process of acquiring the most gigantic corporation ever conceived by the mind of man. The question is not whether the integration of railway interests will continue. This is assured. It is a necessity, and necessity knows no law. The questions are:

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How should the inevitable integration of railways be brought about—whether by the uncontrolled processes now at work, or by processes under control; and when the end is reached, whether we will have a giant which the people shall serve, or a giant serving the people? It may be either, just as the people will it.

Can it be doubted that this process of amalgamation is at work? Look at it broadly. Do you not see it at work in every department of human activity? Not only have workmen in their several trades combined, but they have combined and recombined into a national organization. Capital has done or is doing the same in all directions. Are not all these corporations, mergers, and unions suggestive of the operation of some great social law, under the influence of which the world of business seems recently to have fallen? The constant tendency of increasing intelligence is in the direction of unification. The whole world is a thousand times closer together to-day than it was a hundred years ago. There is scarcely any such thing left as isolation. It would take us far afield to state all the reasons why this is so. The whole subject may be summed up in two interchangeable words: intelligence—organization.

As applied to railway corporations this law has operated somewhat as follows: like railway units—that is the formerly small independent lines,—

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similarly situated and subject to the same forces, first combined. The combinations thus formed were brought within the range of each other and underwent like combinations. This process carried to its logical conclusion means the amalgamation of all railway corporations into one transportation system. Only thus can full efficiency be attained.

There is no more use to try to stop the operation of a natural social law, than there is to legislate against the law of gravity. A thousand pages would not be sufficient to give a complete history of the railway mergers, leases, absorptions, and consolidations which have taken place. After that there would still have to be written the inside history, the doings to get around the laws which have been pestiferous and have driven men to underground methods, but have not stopped the operation of the natural law. And, indeed, how could it be expected that it would be stopped? Laws may be passed declaring it unlawful for parallel or competing corporations to own stock in each other. What of it? Is it necessary to the accomplishment of the result that the corporations should own each other's stock? It is quite sufficient that the same individuals own the stock. Should it be the law that the same individuals may not own shares in parallel lines, or, if you please, in any two or more lines? Well, when the time comes in the United States that one may

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not sell what he owns and another may not buy what is for sale, the occasion will be ripe to throw the constitution into the ditch. But even such a law would be an open bid for its evasion.

Since, then, the process of railway amalgamation is a natural one; since it is interpretable in the terms of high intelligence and organization; why not permit it to work out its result of unifying all transportation facilities? Why impede it? Why this book?

I should be unqualifiedly in favor of facilitating and accelerating the natural process and leaving the accomplished organization under the management of men, free from a taint of governmental influence, were it not for one fact, that human nature invested with such tremendous power becomes—hoggish. Or to put it in the polite words of Judge Dillon : “Uncontrolled power in a few men by any form of corporate device to control the railway systems of a great country is a power too great to be compatible with the public weal, and one which would not be permanently endured by the people.”

We need not stop now to specify the hundreds of ways in which such vast power could be used to the aggrandizement of its managers or the detriment of the people. It is sufficient to say that when our transportation system is complete, it will employ a capital of not less than forty to fifty billions of dollars, and not less than five

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millions of employees, and that those who manage it without control possess the power to overthrow the equilibrium of our institutions. Just to mention one aspect of the case: there is more than one state to-day in which the railway corporations control the balance of political power, and when their consolidation is complete, it is not unlikely that with their vast wealth used to buy up salable votes and their coercive power over their own employees, they could control the balance in national politics. So the question simply is whether we will let our fear of centralized national power so prey upon us that, while we sleep, we will become the victims of another centralized power infinitely more dangerous. If in answer to this it be said that the states by holding to their control over their domestic roads may prevent this result, the answer is, that above all they are impotent to do so. Even if they could prevent the sale of the mere physical assets of the roads within their borders—a very doubtful power,—they could have no authority over the sale of the stocks of the corporations, which, for the most part, are held by people who are not even their citizens.

And now note that the control of the process of railway consolidation is only second in importance to the control of the consolidated corporation which will result. The chief iniquity of the process of railway absorptions, mergers, and consoli-

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dations as carried on at present, consists in the fact that the process is always at the expense of the public. One of these operations which was accomplished without the issuance of quantities of fictitious stock would be considered unprofitable railroad financiering. This should be stopped at once. But how? If there is any power in either the state or nation to grapple with this problem in its entirety, it certainly has never been exercised. It simply does not exist and never will until the whole matter is turned over to the central power by a constitutional amendment which at once defines the mode of consolidation, and the powers, duties, and responsibilities of the transportation system when completed. If to do this be to centralize power, then choose between that and centralized, uncontrolled corporate power.

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